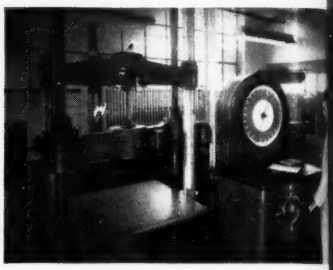
BUTANE-PROPANE News

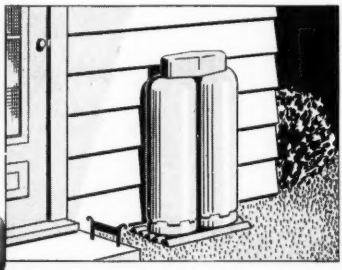
HEADQUARTERS FOR LP-GAS INFORMATION SINCE

DECEMBER, 1951 — 50¢ per Copy

special tests
guard material quality

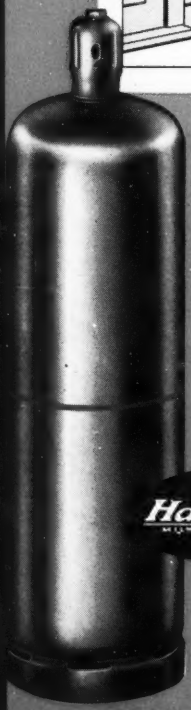
HERE





to assure a better
hackney cylinder

THERE



Testing is a very important phase of the manufacture of Hackney LP-Gas Cylinders. Pressed Steel Tank Company, manufacturer of Hackney Products, takes every conceivable precaution, uses every applicable testing device to assure LP-Gas operators top quality cylinders.

The laboratory engineer pictured above is determining the physical properties of materials used in Hackney Lightweight Cylinders. Other tests include: microphotography of steel and weld specimens, periodic pull tests of material cut from completed cylinders, hydrostatic pressure tests and many others.

This testing skill is only part of the care that typifies the quality of Hackney Lightweight Cylinders. Skill in design and skill in manufacturing techniques . . . skills that are founded on almost 50 years of experience in the production of compressed gas cylinders . . . keep Hackney Cylinders preferred 2 to 1 by LP-Gas dealers and distributors everywhere.

For full details on Hackney LP-Gas Cylinders, write us.

Hackney
MILWAUKEE

PRESSED STEEL TANK COMPANY

Manufacturer of Hackney Products
1487 S. 66th St., Milwaukee 14
1399 Vanderbilt Concourse Bldg., New York 17
227 Hanna Bldg., Cleveland 15
936 W. Peachtree St., N.W., Room 112, Atlanta 3
208 S. LaSalle St., Room 790, Chicago 4
552 Roosevelt Building, Los Angeles 14

CONTAINERS FOR GASES, LIQUIDS AND SOLIDS

Storage Called Number One Problem Of 'Unbalanced' LP-Gas Industry

Storage is the key to successful distribution of liquefied petroleum gas, Howard Felt, vice president of Warren Petroleum Co., Tulsa, told members of the API Refining Division at a session on LP-gas in Tulsa May 3.

"The foundation of satisfactory and successful distribution of LP-gas is storage," he said. "The amount of transportation needed, and to a large... ter is by all odds the industry's No. 1 problem."

He pointed out, "The summer load which can be developed to offset the heat load is extremely desirable and well worth the strenuous efforts now being put forth; but, industrywise, it is doubtful if it ever will equal the winter demand for heat. Therefore, the ultimate approach to LP-gas ... is through storage."

Clipping from National Petroleum News issue of May 23, 1951

Install ROCKWELL LP-Gas Meters and Lick the Storage Problem

USE YOUR CUSTOMERS' TANKS FOR STORAGE

With a Rockwell meter guarding every service you can fill your customers' tanks at any time to augment your own limited bulk storage facilities.

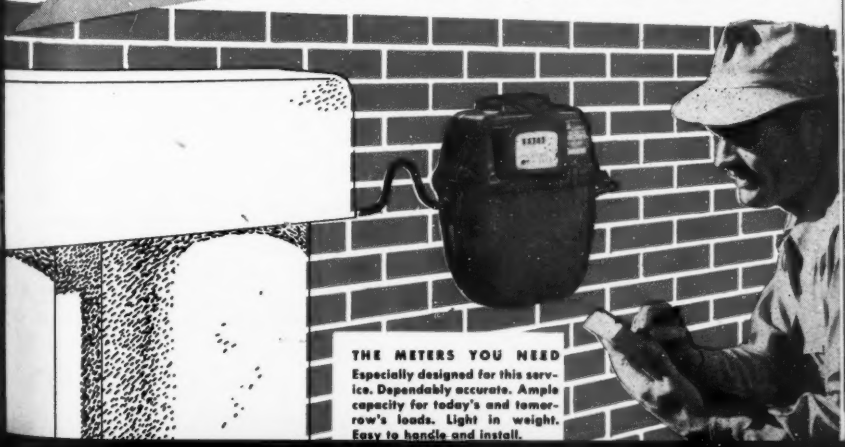
Think what this means. First, you won't need to make a heavy investment in additional central storage facilities to take care of increased business. Second, you can buy LP-gas in larger quantities at seasonally advantageous prices. Third, you can reduce your year-round delivery costs.

Such savings will quickly offset your nominal initial investment in Rockwell meters and will soon reflect in increased profits. Just try them and see. Write for prices and full details.

ROCKWELL MANUFACTURING COMPANY

Pittsburgh 8, Pa.

Atlanta Boston Chicago Columbus Houston Kansas City
Los Angeles New York Pittsburgh San Francisco Seattle Tulsa



THE METERS YOU NEED

Especially designed for this service. Dependably accurate. Ample capacity for today's and tomorrow's loads. Light in weight. Easy to handle and install.

DECEMBER, 1951

BUTANE-PROPANE News
ABC BCA

CONTENTS

VOLUME 13 • NUMBER 12

A JENKINS PUBLICATION

Publication Office
Los Angeles (4)—198 So. Alvarado St.
Phone DUnkirk 7-4337

Branch Offices
New York (18)—11 W. 42nd St.
Raymond M. Schuster, District Mgr.
Phone CH 4-1969

Chicago (3)—1064 Peoples Gas Bldg.
David Carmen, District Mgr.
Phone WAbash 2-2589

Cleveland (22)—19718 Lanbury Ave.
James K. Gillam, District Mgr.
Phone WY 1-2587

Tulsa—P. O. Box 4055
Craig Espy, District Mgr.
Phones: Bus.—2-2414; Res.—7-9807

•

Lynn C. Denny, Executive Editor
Carl Abell, Editor
Lester L. Luxon, Technical Editor
Barbara Hall, Editorial Assistant
O. D. Hall, Mid-Continental Editor
Raymond A. Grote, Art Editor

•

Jay Jenkins, President and Publisher
Paul Lady, General Manager
D. Newlon, Advertising Manager
C. F. Kamin, Circulation Manager
Gene Masters, Research

•

BUTANE-PROPANE News is published monthly. Copyright 1951 by Jenkins Publications, Inc., at 198 So. Alvarado St., Los Angeles 4, California. Subscription price: United States and U. S. Possessions, Canada, and countries in Pan-American Postal Union (in advance), 50c per copy, one year $2; two years $3. All other countries one year $4; two years $7. Entered as second-class matter May 29, 1939, at the post office at Los Angeles, California, under the Act of March 8, 1879. Member of Audit Bureau of Circulation, Controlled Circulation Audit, Liquefied Petroleum Gas Assn., National Butane-Propane Assn.

Publishers: GAS, The Magazine of the Gas Utility Industry; HANDBOOK BUTANE-PROPANE GASES; THE BOTTLED GAS MANUAL; Annual BUTANE-PROPANE News CATALOG; B-P News BULK PLANT DIRECTORY; WESTERN METALS.

Letters

HEADQUARTERS FOR LP-GAS INFORMATION SINCE 1931

INDIANA

In regards to filling over-the-road truck or car tanks. If a tank says 50 water gallons, how much propane will it hold at 90% full, filling to your 90% outage gauge, regardless of temperature? I know it will vary with temperature.

Can a Rockwell 00 meter be put in a filling line to show your correct amount of fill in an over-the-road truck tank or for cars?

F.C.

A 50-gal. water capacity tank, filled to the 90% gauge, will hold 45 gals. of propane. These 45 gals., however, are measured at the temperature of the liquid propane in the tank. If it is required to convert to standard gallons which are gallons of propane at 60°F, it is necessary to multiply the gallons measured at the temperature metered by a factor. These factors are all listed in Table I on p. 51 of the Handbook Butane-Propane Gases.

A 00 Rockwell meter is for low pressure service only and cannot be used for metering liquid or high pressure vapors. It is built to use for metering low pressure gas (under 1 lb.). The Rockwell Manufacturing Co. builds a liquid LP-Gas meter as does Neptune Meter Co. Liquid meters must be properly installed with pumps and suitable accessories to insure correct metering of liquid LP-Gas.—Ed.

●

WISCONSIN

We would like to know the monthly consumption of propane for an institutional kitchen, feeding 500 men three meals daily. The equipment will be of the newest type and design.

Our customer wants to make a decision as to electricity @ .02 cents per K.W. propane @ .033 cents per pound.

B.O.

There is little data available which includes the information you desire. On page 218 of the Handbook Butane-Propane Gases, Table 2 lists some gas usage quantities for military camps. This table shows a usage of 222 lbs. of LP-Gas per man per year for cooking and heating hot water for kitchen use.

Propane at $.033 per pound versus electricity at $.02 per kilowatt should give you a good advantage. One kilowatt hour is equivalent to 3413 Btu while 1 pound of propane when burned will release about 21,600 Btu. Therefore, it will require 6 1/3 kilowatts ($.126) to supply the same amount of heat by electric power as a pound of propane will supply.

With top burner cooking there is probably little difference in the efficiency of heat delivered to useful work, while in oven cooking and water heating it is conceivable that 95 to 98% of the heat stays in the oven or water heater, while with gas, 75 to 80% efficiencies are normal.

Gas has several other advantages, a few of which are: It is faster, less meat shrink-

● **BUTANE-PROPANE NEWS welcomes letters from our readers, but it must be understood that this magazine does not necessarily concur in opinions expressed by them.—Editor.**

age in roasts, better temperature control, and quicker turn-down of heat when cooking vessels are up to temperature.—Ed.

•

ILLINOIS

We would like to know the vaporizing capacity (without vaporizer) of a horizontal tank 37 ft. long by 4 ft. in diameter. We are near Chicago.
G.E.M.

The tank you describe has a fuel capacity of approximately 3500 gallons and the surface is roughly 490 sq. ft. A conservative figure for heat transfer to the liquid in a tank is two Btu per sq. ft. of wetted surface for °F temperature difference between the surrounding air temperature and the liquid in the tank.

The relative humidity in the Chicago area is relatively high, averaging 80 to 85% over the year. This means that little heat can be taken from the liquid to vaporize the fuel. If the temperature of the liquid falls more than 5° below the surrounding air temperature, frost and ice will start to form when the relative humidity is 80%. Therefore only about 5° temperature differential is available to transfer heat.

Assume a cold winter day with the following conditions:

Outside temperature	0°F
Relative humidity	80%
Fuel in tank	50%

Determine the vaporizing capacity of the tank under steady load. As stated above, the fuel can drop to only 5°F. The tank is one half full so only 490÷2=245 sq. ft. of tank surface is wetted. So 2 Btu per sq. ft. × 50°F temperature difference × 245 sq. ft.=2450 Btu per hour heat transfer.

It requires about 730 Btu to vaporize a gallon of propane at 0°F (see Handbook Butane-Propane Gases, p. 26), so 2450 ÷ 730=3 1/3 gal. per hour is theoretically all the tank can vaporize per hour when one-half full of liquid. However, the 2 Btu per hour is conservative. It is assumed the air is quiet (no wind), there is no sunlight or other sources of heat and that the load is steady. Actually, the vaporizing capacity of the tank under the above conditions could be double or even triple the rate calculated.

There is some heat released by the liquid in dropping from 0°F to −5°F which will be used to vaporize fuel. The specific heat of propane at 0°F is .548 (See Handbook, p. 45). There was assumed 3500÷2=1750 gal. @ 4.63 lb./gal. @ °F (see Handbook, p. 46)=8100 lb. of propane in the tank. 8100 lb. × 548 × 5°F=22,200 Btu released to vaporize from the liquid during the 5°F drop to vaporize fuel. 22,200 ÷ 730=30 gal. vaporized.

From the above you will note that you cannot expect to vaporize more than 10 gal. or so per hour in the tank you describe on a cold day, nor can you expect the latent heat in the liquid to help very long, as 30 gals. vaporized drops the liquid temperature 5°F. Your load of 3,000,000 Btu per hour is 32 to 33 gals. per hour and will be 40 gals. if vented heaters are used.

We would recommend that a vaporizer be used on this job. It will insure good service, more uniform gas composition, and allow a greater range in fuel deliveries. —Ed.

•

OREGON

We have a carburetion problem on which we would appreciate some of your very good assistance.

We have a prospective customer who owns a 1949 F-8 Ford 145 horsepower which he uses for logging, with which he hauls 72,000 lbs. gross.

We have been unable to get the necessary information locally on how much he can plane the head of this motor to get the maximum efficiency. Also we would appreciate it very much if you could give us complete data on a conversion that will give him the most out of his motor. In terms of gears, do you feel that he could gain from one-half to one gear

of power in converting to propane gas? Our gas is all 2550 Btu propane.

R.L.B.

Your customer's F-8 Ford truck engine may be high compressioned by substituting the heads from the Lincoln passenger car engine, to give a compression ratio of 7.0:1. Planing .060" off the Lincoln heads gives a new ratio of 7.75:1. When doing this, it is advisable to deepen the cells above the dome-top pistons an equal amount, so there will be adequate clearance between the pistons and the heads.

The use of commercial butane in this engine with 7:1 ratio would provide approximately the same power as the standard engine using gasoline. Likewise, the 7.75 ratio operating on the 2550 Btu propane which you market would give nearly the same horsepower as gasoline in the standard engine. 7.75:1 would be a little extreme for butane, and would probably result in excessive detonation.

The intake manifold should be made to operate as cool as possible, as this will make a further gain in power, and by this means you should be able to give the operator the extra torque necessary to operate in the next half gear higher. The manifold may be cooled off by fitting stainless steel plates over the holes through which the exhaust gas passes to circulate through the intake manifold.

It is possible to plane off more than .060" from selected Lincoln heads, and get a higher ratio and more power. This should only be done if the operator understands clearly that the engine should be kept up to the recommended operating speed whenever it is pulling a load. The Ford engine is not built for lugging down, and a raise in power will only aggravate the troubles that come from lugging to too low speed with the standard power.

The fuel consumption with the converted engine will probably be slightly more than with gasoline, unless the operator has quite a lot of part-throttle operation. It takes a ratio of better than 8.5:1 to equal gasoline economy, in terms of miles per gallon, during full throttle operation. If the price differential between gasoline and propane is four to five cents per gallon, the operator should still save money by using propane. And if he will keep his engine speed up where it belongs, he should experience a very good saving in engine maintenance.—Ed.

●

NEBRASKA

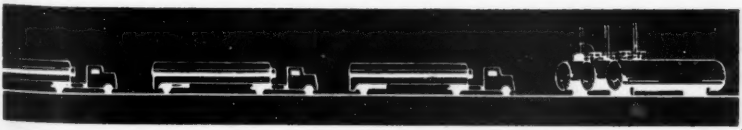
We plan to install a propane gas system with the storage tank located from 500 to 1000 feet from the point at which the gas will be consumed. Consumption will be at the rate of approximately 300,000 Btu per hour. We will use both high and low pressure regulators and will carry approximately 20 pounds of pressure in the line.

Is ½-inch (ID) black iron pipe of sufficient size if the tank is located at a distance of 1000 feet? If not, would this size pipe be large enough if the distance were only 500 feet? If answers to both questions are negative, what sizes of pipe would you suggest?

R.M.L.

The ½-in. black pipe is adequate to deliver the 300,000 Btu per hour with not over 1-lb. drop in pressure between the primary and secondary regulators. However, in determining the length of pipe through which the gas must flow, do not forget to allow extra for elbows, valves, and other fittings. (See Table No. 1, p. 316 of the Handbook Butane-Propane Gases.)

The new 1951 edition of the Handbook contains Table No. 4, p. 317, which makes the sizing of pipe for high pressure lines easy.—Ed.



Comment

FIFTEEN per cent more liquefied petroleum gas will be available in January, 1952, than in January of this year, according to a report of the National Petroleum Council's Committee on LPG availability, transportation and materials requirements.

A monthly rate of 380,386,269 gallons was estimated would be available beginning January, 1952, as compared to 328,690,040 reached in January, 1951, said the committee.

Transportation facilities are expected to be able to take care of the increase in supply, since "pressure tank car construction has kept pace with the increased production of liquefied petroleum gas," according to the NPC group.

The LP-Gas committee of the NPC is headed by W. K. Warren, Warren Petroleum Corp., Tulsa. K. W. Rugh, Phillips Petroleum Co., Bartlesville, Okla., directed the sub-committee's study on the availability of LPG.

On the other hand, some sources say unduly cold weather this winter could tax production facilities, transportation equipment, and existing storage because demand has increased nearly 25%.

So as usual, we will just have to wait and hope. By another year, however, there ought to be greater security through the use of underground salt domes in which summer surpluses can be stored against winter demands.

•

In discussing the tank car situation, the NPC committee said that 50 to 75% of an estimated 32,000,000-gallon monthly increase in production will have to be moved by rail. The group reported that the pressure car fleet—10,302 as of last Jan. 1—has been increased by 1,270 cars already built in 1951 and will be further expanded by another 1,071 cars due to come off the assembly lines before the end of the year. These cars will be capable of transporting 72% of the estimated increased production.

•

"All I can see is overproduction—and soon."

Those are the words of Eugene G. Grace. He heads the nation's number two steel making concern, Bethlehem Steel Corp., according to the "Wall Street Journal."

Businessmen the country over have been mulling over these twin questions, continues a recent article. Where is all the huge steel production going? When will supply overtake demand?

The nation's mills are currently running at record levels—close to 105% of theoretical capacity for one recent week. Steel ingots . . . are pouring out at an annual rate of over 104 million tons. That's over 7% more than was produced in record 1950. It would be about double 1939 output.

The nation's mills are building facilities to further expand production. By the end of 1952 the industry is expected to have a producing capacity of 118 million tons.

Still, most of the talk from Washington, from steel users and steel producers, is of "shortage." And a

Wall Street Journal check of dozens of producers and fabricators shows demand is indeed running ahead of supply for most types of steel.

Yet, the canvass shows definite—though scattered—signs that the steel shortage may be easing some places. Barring serious interruptions to output by mill strikes or a shortage of steel scrap, some steel men say demand and supply could come into balance sometime next year.

"Demand is not as urgent; a good deal of the heat has gone off," says a sales executive for a big Pittsburgh steel maker. He adds that he wouldn't be surprised to see supply catch demand in the first quarter of 1952 or early in the second quarter.

•

The Petroleum Administration for Defense has approved more than 200 applications for priorities assistance which will add approximately 86,000 barrels of light hydrocarbons (butane, propane, pentane, etc.) to the nation's daily production.

The announcement was made in a speech before the California Natural Gasoline Assn. in Los Angeles, by Richard P. Walsh, of the PAD.

Mr. Walsh also told the group that several pipelines for the transportation of liquefied petroleum gas are under consideration, one of which will move 10 to 20 thousand barrels a day to the Chicago area.

•

Speaking at the opening session of the two-day regional conference conducted last month by the National Fire Protection Assn. at the Hotel Ambassador, Los Angeles, Percy Bugbee, general manager of the association, said that it was estimated that there were 1,700,000 outbreaks of fire in the United States in a year and that the very great majority of these fires were due to acts of carelessness.

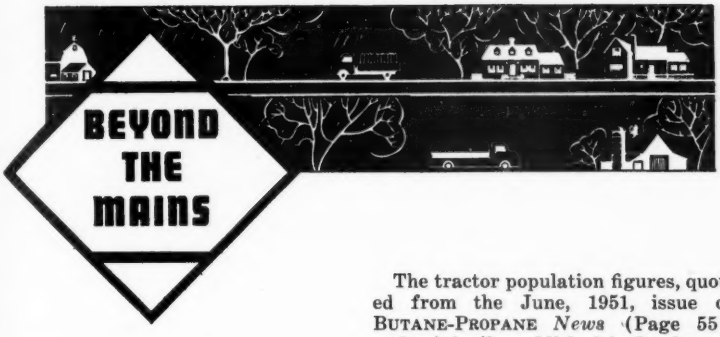
Mr. Bugbee said that the only way that we can expect to halt the present tragic toll of more than 11,000 deaths by fire and property losses of $700,000,000 annually is through the mass education of the general public in the simple measures needed to save life and property from every-day outbreaks of fire.

Frank Fetherston, LPGA technical vice president, addressed the Los Angeles meeting on liquefied petroleum gas.

•

Aggressive merchandising and production-line ingenuity, without resort to "war emergency" models, will enable the gas appliance industry to meet public demand for gas ranges, water heaters and home heating equipment in the first half of 1952, Harold Massey, of the Gas Appliance Maunfacturers Assn., predicted last month.

The increased rate of industrial production of all types, a sharp rise in installment buying, and a "break at last in the public's buying apathy" have contributed to a "bullish" outlook for the gas appliance market, despite materials limitations, corporate and excise taxes and price controls which will prevent the industry from matching its record volume of last year.



DETAILED study of the U. S. Bureau of Mines figures on consumption of LP-Gas in the various states reveals some rather surprising comparisons. As noted in the November issue of BUTANE-PROPANE *News* (Pages 45-47), the greatest progress in developing the internal combustion fuel market has been made in California. This is made even more noticeable by figuring the percentages of internal combustion fuel gallonage in relation to the domestic and commercial consumption in the various states.

These percentages for the 10 states leading in engine fuel gallonage are shown in order of rank in Table 1.

TABLE 1. Ratio of Internal Combustion Engine Fuel Sales to Domestic and Commercial Consumption.

State	Percentage	Total Tractor Population
California	29.8	110,970
Texas	8.5	227,335
Illinois	10.5	232,480
New Mexico	14.3	19,430
Louisiana	4.5	30,978
Kansas	7.6	153,162
Oklahoma	5.25	102,000
Minnesota	6.25	213,578
Mississippi	6.35	40,467
Arizona	10.6	9,432

The tractor population figures, quoted from the June, 1951, issue of BUTANE-PROPANE *News* (Page 55), and originally published in Implement and Tractor Magazine, July, 1950, are included to emphasize the wide variation of "performance" in relation to potential of tractor conversions in these states. For example, New Mexico consumed nearly 20% more butane-propane gas as engine fuel than was used in Kansas, yet Kansas has nearly 8 times as many tractors as New Mexico.

Further calculation, based on average gallonage consumed per year per tractor, indicates that only a small percentage of the available tractors in any state has been converted. According to the best available figures, the conversions in the 10 leading states range from 2% to 12% of the total tractor population. This indicates that tractor conversion as a means of increasing gallonage and helping to balance the gas distributors' seasonal load comes under the heading of "Opportunities Unlimited."

It is known that in all of the states listed in Table 1, there are local areas which have been "hot spots" for tractor conversion. The results in these outstanding areas did not just happen. Somebody made them happen, by taking advantage of opportunities and doing the necessary hard work.

A study of the methods used in these areas should provide a wealth of

ideas which may be applied in other places with beneficial results. Such a "case history" appears in the "Power" Section next month.

Studies of other localities in which outstanding results have been achieved by other methods will follow as opportunity permits.

•

How much safer is propane storage than gasoline storage? A recent notice from the Wichita Transportation Co.'s insurance company advised that insurance premiums for coverage of propane storage and dispensing facilities had been reduced 25% compared with the transportation company's gasoline set-up. Both facilities were installed according to the Kansas Fire Marshal's standard specifications.

Manager John E. Ebinger, of the Wichita Transportation Co., explains the premium reduction by saying, "Phillips Petroleum Co. gave us outstanding engineering help in planning our fuel installation. The insurance company checked the specifications, and sent one of their field men over to check the installation. They arrived at the conclusion that our propane installation is 25% safer than our gasoline set-up."

Bus operators throughout the nation are familiar with this situation, as the above statement appeared in the October issue of Bus Transportation magazine.

•

Dealers will be interested in what the Rural Electrification Administration says about the disadvantages of heat lamps for brooding chicks. The October-November issue of the "Rural Electrification News" carries a major article on the above subject.

After listing what is claimed as advantages, the article lists these reasons as being unfavorable to electric brooding:

1. Suitable automatic heat controls are not yet available. The operator may have to do some experimenting to learn how much to raise and lower the lamps or when to turn lamps off to control the heat.

2. There may be excessive moisture condensation on the walls and ceiling and in the litter not under the lamps.

3. Different methods of ventilating the brooder house are needed from those used with conventional brooding and the best methods have not yet been determined.

4. There is more need for an off-current alarm, and a lengthy outage may be more serious.

5. In case of diseases, when considerably more than normal amounts of heat are needed to help the chicks recover, the installation may not have facilities for the extra lamps needed.

6. Drafts in the brooder house are more serious.

7. The amount of radiant heat needed and the best lamp arrangements for all different conditions have not yet been determined.

8. Chicks are in the light continuously and therefore do not know darkness. In case of an outage at night, there may be excessive fright at night with its attendant damage, even though the chicks are not chilled.

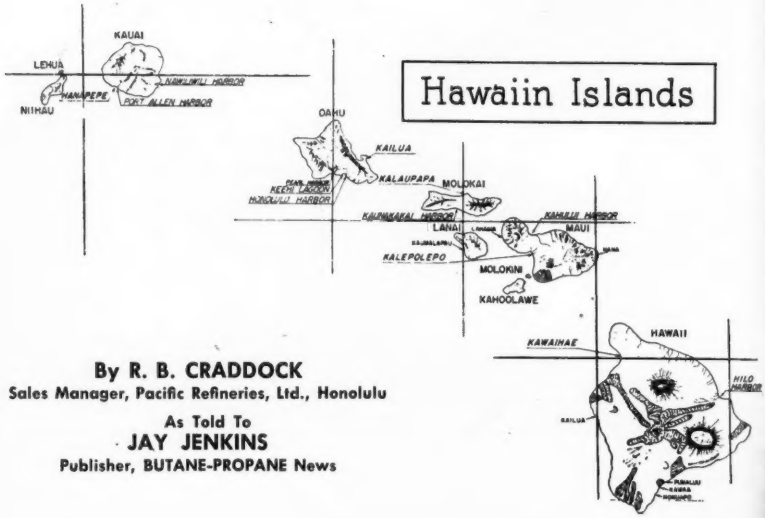
9. The cost per chick for electricity will be higher than for hover-type brooders.

•

Some business firms operating delivery fleets consider that a truck in service is worth what it costs to hire another truck to do its work during lay-up time for repairs. Since engines burning LP-Gas require less frequent repairs, this reduction in the cost of providing service with hired vehicles should be added to the other savings which result from lower fuel cost, reduced wear, and cleaner engine operation.

LPG in Paradise

An installation at Kailua, Hawaii



By R. B. CRADDOCK
Sales Manager, Pacific Refineries, Ltd., Honolulu

As Told To
JAY JENKINS
Publisher, BUTANE-PROPANE News

FISHING shacks on isolated beaches, mountain resorts at 7000 feet elevation, lonely cabins in the recesses of tropical valleys, plantation cottages, and suburban mansions—such are the users of butane in Hawaii, U.S.A.

As a market for America's fastest growing fuel industry, the Territory of Hawaii is in many respects unique. For one thing, it is more than 2000 miles from the nearest oil or gas well, and there's nothing but the Pacific ocean in between. That, in itself, poses quite a transportation problem.

Furthermore, the Territory is not just one large island. There are six major inhabited islands, from 6 to 60 miles apart, although more than two-thirds of the people live on Oahu, where Honolulu is situated. This adds the problem of transportation between islands. The islands, themselves, are mountainous, of relatively recent volcanic origin, and towns are largely confined to the seacoast and adjacent foothills.

Hawaii's people come from a variety of oriental and occidental strains, and the culture of the islands is an amazing mixture of East and West, spiced with Polynesian music and languor. A majority are descendants of workers brought to the islands since the latter part of the 19th century to till the soil of the Territory's sugar and pineapple plantations.

The market for butane in Hawaii consists of more than 60,000 dwelling units outside the city of Honolulu. The islands' capital and principal city is served with manufactured gas produced by Honolulu Gas Co. Rural and neighboring is-

land homes are divided among plantation communities, isolated truck farmers and ranchers, and retail centers which serve these areas.

For more than two decades, LP-Gas has been distributed in the Territory by oil companies, and independent dealers, who, however, undertook no active promotional effort. Furthermore, the LPG price to consumers was not competitive with other fuels; not even with electricity, which is high in rural areas. By 1949 only 4000 LPG customers were to be found in Hawaii, although there were some 17,000 dwelling units on sugar plantations alone. In that year the ordinary sugar worker (below the rank of supervisor) was earning an average of $8.04 a day. And pineapple workers earned even more.

Into this situation there stepped a new company, with a new idea. Pacific Refiners, Ltd., was organized in June, 1949, by the stockholders of Honolulu Gas Co. A. E. Englebright, for many years chief gas

The Pacific Refiners plant, sandwiched between the waters of Honolulu Harbor and the Pearl Harbor highway, is the source of butane for thousands of new customers in Hawaii.

A. E. ENGLEBRIGHT

R. B. CRADDOCK

consultant for Ebasco Services, Inc., of New York, had taken over the post of vice president and general manager of the gas company, and it was he who devised the plan for bringing butane to more people at a lower price.

In the past the oil companies had distributed LPG in individual cylinders ranging in size from 35 pounds to 210 pounds. There was no bulk storage plant in the islands, which meant that each cylinder had to be shipped back to the West Coast for refilling. For every pound of LPG delivered, the customers had to pay freight on three pounds, since the gas weighed as much as the cylinder and the cylinder had to be shipped two ways. The basic problem in lowering the cost of LPG to the consumer involved eliminating the freight on cylinders.

Mr. Englebright came up with a solution. The answer was wrapped up in an entirely new kind of industry for the Territory—an oil refinery. By blending butane and crude oil, they could be brought to the islands in the holds of tankers instead of in the small cylinders. In this manner the LPG could be brought to the islands in large quantities and at a greatly reduced cost. Upon its arrival in Hawaii the butane would be distilled off and stored. This, however, brought with it the problem of disposing of the crude oil.

The refinery idea also included an attack on the transportation cost of another important commodity for the islands: road asphalt. Traditionally, asphalt had been brought to Hawaii in water emulsion (in which case cost of transporting the water was included) or in steel barrels (which were hacked open and destroyed, and which involved high packaging and handling charges). By a further distillation of the oil

WHEN SHIPMENT OF FILLED CYLINDERS from the mainland to the Hawaiian Islands proved too costly for competition with other fuels, the Honolulu Gas Co., through its affiliated company, built its own refinery, bargained for sea-going tank ships to bring in crude oil blended with butane, and extracted the LPG at the point of distribution.

The result is a low-price gas for the rural areas of the islands which has raised the living standards of the natives and provided a profitable sideline for the operating company.

after it left the butane column, the company planned to produce a high grade road asphalt, enough to supply all of the Territory's needs.

The remaining oil also had a good market: Honolulu Gas Co., which would use it in the manufacture of gas for the city system.

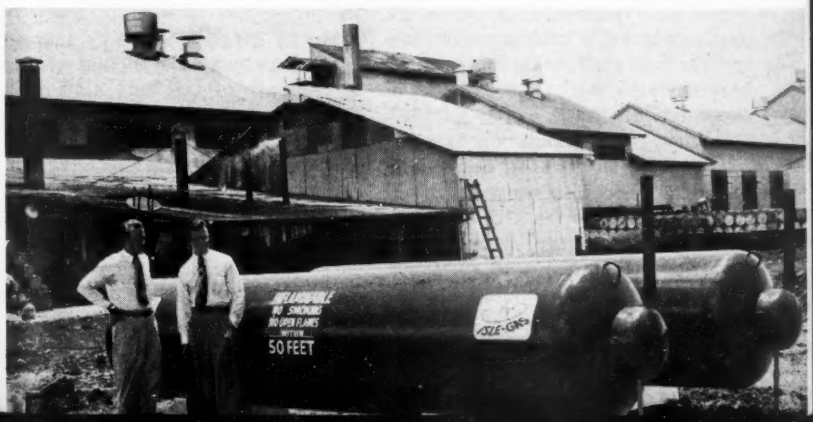
Such were the company's plans back in 1949. Today the refinery is in operation. Butane—under the trade name "Isle-Gas"—is being distributed to 2000 customers on five islands and from 125 to 200 new customers are being added each month. Road asphalt is being supplied to contractors throughout the islands, and for military installations on islands to the westward. Honolulu Gas Co. is being supplied with an excellent quality gas-oil.

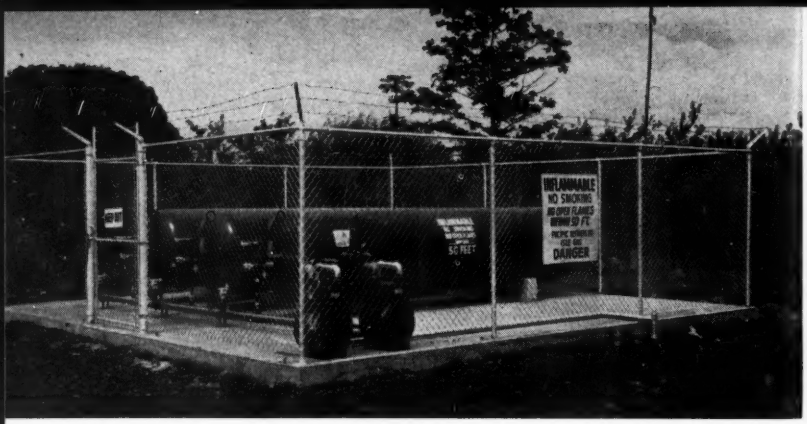
While the refinery was being completed, Pacific Refiners had to prepare to distribute Isle-Gas, both on the island of Oahu, where the plant is situated, and to neighboring islands. To maintain the benefits from bulk handling of butane, the company decided on the use of storage tanks of from 150 to 1000-gallon capacity, with the average domestic installation being the 150-gallon size. Chosen as best suited for island conditions were horizontal tanks with end fittings.

Arrangements were made to secure tanks for bulk storage and transportation through Jack Lane, president of the American Pipe & Steel Corp., who also contributed to solving many of the unusual problems encountered in establishing the entire project.

Although many LPG users have been converted to the yard tanks, there is still some volume of business in 100-pound cylinders because of the closely built housing in rural towns. Distribution is handled directly from the refinery on Oahu, utilizing large tank trucks which had to be carefully chosen for ma-

Frank Staples, left, Pacific Refiners' manager in Hilo, and James Chandler, manager of Hilo Gas Co., inspect the butane installation at the Canec wallboard plant. LP-Gas has replaced diesel fuel here.





"Isle-Gas" installation at the Lanakila Project of the Hawaii Housing Authority at Hilo, Hawaii, serving 151 new homes.

neuverability in the narrow streets of plantation communities. Isle-Gas customers equipped with yard tanks on Oahu also have their service metered. Each month Pacific Refiners sends each customer a specially designed return postcard on which to record his meter reading. When the card is received by the company, it is checked against his previous reading to determine his monthly bill.

Distribution from the refinery to neighboring islands is handled in export skid tanks of 1144-gallon capacity, which are transported to the various bulk stations by inter-island barges which visit the major ports about twice a week.

Although its population is only about one-fifth that of Oahu, the island of Hawaii is more than six times as large, with two volcanic peaks rising higher than 13,000 feet, and others rising to 8000 and 5000 feet. With the populace spread in a thin line along its 318-mile coast, it was necessary to set up three bulk stations on Hawaii, two of them serving isolated parts of the island and the other operating from the principal city of Hilo. The outlying stations are at Kohala, site of a large sugar plantation separated from the rest of the island by an abrupt mountain range, and at Kealakekua on the Kona coast, a popular tourist and sports fishing center.

Other bulk stations are on the islands of Maui, Molokai, and Kauai.

Frank Staples, who was trained in the company's Honolulu offices, is manager of the bulk station in Hilo, and is also in charge of the stations at Kealakekua and Hawi, Kohala. All bulk stations maintain a supply of 5000 gallons of Isle-Gas, with those at Hawi and Kealakekua being replenished from Hilo. Because the condition of mountainous highways precludes the use of large transports, the fuel is moved from

Hilo in 1144-gallon tanks mounted on trucks.

Only on the island of Molokai are customers served by an independent distributor. There Duvauchelle's, Ltd., a general appliance retailer, represents the company. Pacific Refiners has its own distribution organizations at Lihue, Kauai where John Croft is manager, and at Wailuku, Maui, where Alfred Barros is in charge.

In contrast to the method used on Oahu, Isle-Gas customers on neighboring islands do not have their service metered. At the time the installation is made the customer's monthly use is estimated, and he is billed each month for that amount of fuel. When the customer's tank is refilled, his exact consumption is calculated and his bill adjusted accordingly.

Expert Service Given

An advantage which today's LPG customer enjoys through Pacific Refiners is expert care of his gas appliances. In the past there were no specialists available to keep appliances in top working order. Today the company has trained servicemen on the job, operating from the bulk stations and doubling as installation crewmen.

While Pacific Refiners was busy establishing its distribution facilities for Isle-Gas on neighboring islands, another opportunity was in the making. Hilo Gas Co., Ltd., which sold manufactured gas to some 2000 customers in Hawaii's largest community, was in economic straits. Its plant was inefficient and outmoded, and nearly worn out.

Officials of Honolulu Gas Co. inspected the Hilo firm's equipment, with particular attention to its distribution system, and decided to buy it. Because of the condition of the gas manufacturing plant, the obvious course of action was to convert Hilo to butane-air.

Found Bad Conditions

Experienced gas men found some strange and unorthodox arrangements in the Hilo distribution system. Some homes had two meters, and no regulators. Many had regulators that had long ceased to function. Others had meters that produced purely fictional consumption figures. The mains and service lines were in such shape that the line loss sometimes ran as high as 30%.

Honolulu Gas Co. propped, and welded, and improvised for four months while it waited for the butane-air equipment to arrive. The new system was installed on the grounds of the old plant, and tied in to one of the existing holders. The changeover to butane-air was made on April of this year.

Butane is fed into the system from 1144-gallon skid tanks which arrive by barge on a regular schedule from the Pacific Refiners plant in Honolulu.

During the year since Honolulu Gas Co. took over the Hilo system, an active renovation program has been under way. Nearly all meters have either been replaced or repaired, as well as regulators, the absence of which in times past had some strange effects on appliances at peak use periods.

Furthermore, an energetic sales

promotion program has been undertaken, beginning with the day when Pacific Refiners and Hilo Gas Co. opened the new and larger quarters which they jointly occupy. On that day there was music and hula dancing and a drawing for an automatic gas dryer. One of the Honolulu Gas Co.'s home economists was on hand to serve refreshments and to demonstrate the superiority of gas cooking.

Hilo, ordinarily a very quiet town, woke up, and more than 8000 people poured through the new office that day.

Manager of the Hilo gas division of Honolulu Gas Co. is James R. Chandler, who came to the islands after extensive experience in butane operations in Indiana and California. Today the Hilo Gas system sends out more butane than the total Territorial consumption of LPG in the days before Pacific Refiners.

In developing its market, the company's sales force first went after

"Time is money. Gas is fast." This message is told in six languages in this display at Honolulu's 49th State Fair. Signs are in Chinese, Japanese, Spanish, Hawaiian Filipino and English.

commercial installations such as restaurants and school cafeterias. This procedure had the effect, first of all, of building Isle-Gas load for the refinery, and secondly of giving salesmen a talking point when they went out into the domestic field. The plan brought rapid results, and today most of Hawaii's rural restaurants and schools are customers.

Commercial installations, however, are continuing to be a major element in the company's business. American Can Co. has two can-making plants on the island of Maui, and two on Kauai, where Isle-Gas provides flame for the seamers.

In Hilo, Flintkote Corp.'s Canec division has a large Isle-Gas installation for use in drying the cane fibre used in manufacturing its popular wallboard, and in drying coatings for some of their wallboard styles. Isle-Gas, although more expensive than oil for these uses, was chosen because of its superior operating characteristics.

Another interesting installation in Hilo is the butane vapor system serving Lanakila Homes, a public housing project with 150 units. These homes are served by an independent distribution system fed from three 1144-gallon skid tanks, and each of the dwelling units operates a gas range and gas water heater. This installation will consume about 4000 gallons of LPG per month.

High above the clouds, in the crisp atmosphere at the 7000-foot level on the slopes of Haleakala on the island of Maui, Isle-Gas provides warmth and hot meals for tourists in a unique mountain lodge. Trekkers returning over the 10,000-foot summit from hikes or horseback trips into the fabulous extinct crater are ready for Silversword Lodge's hot food—or a toddy.

Isle-Gas distribution continues to grow, despite the fact that Hawaii's large oriental population is slow to abandon older methods and is cautious with its pennies. An important factor in this growth has been the attractive, competitive price, and the demonstrable cleanliness and convenience of the fuel. It's a "show me" market. One dramatic move was the 12% reduction in Hilo gas rates made possible by the change to butane-air. And the price of Isle-Gas is in some cases as much as 50% lower than LPG distributed by older methods.

Distribution of the fuel alternately by highway and barge presents problems which perhaps no other LPG market has, but the same problems must also be faced by the fuel's local competition. Pacific Refiners officials are inclined to take some pride in the fact that within two years' time, a refinery has been built, retail or wholesale outlets have been established on five islands along the 350 miles of the Hawaiian archipeligo, and Isle-Gas has been established as an active contender in the rural fuel market.

Most of the mechanical problems have been licked. Salesmanship is taking over for the attack on the big market that lies in the plantations, farms, ranches, and rural towns. LPG is a natural for the Paradise of the Pacific, and we intend to prove it.

Colorado Dealer's Community Party Produces 1800 Gas Prospects

By J. E. ANGEL

ALTHOUGH C. B. Ray, owner of the City Gas Co., of Grand Junction, Colo., uses conventional mediums to develop the sale of butane-propane gas and equipment, he feels that an occasional party helps to stimulate business by filling the prospect file with a lot of new names. That is why he recently sat down and worked out the details for a community reception that was held in the City Gas Co.'s display rooms.

The affair turned out to be a huge success. Mr. Ray made many new friends as a result of the enterprise. Some of these have already replaced antiquated heating and cooking facilities as a result of what they saw at the party. They are now users of efficient LP-Gas.

When Mr. Ray completed his plans, he had developed the kind of a reception that those in the community understood and appreciated. He decided to serve food to all of his guests, to give every woman who attended an attractive gift at the door, and to conduct drawings for valuable prizes during the day.

Letting The Community Know

First of all, Mr. Ray wanted his party to be well attended. In order to be sure it would be, it was necessary to extend a widespread and cordial invitation to as many people as possible. The public had to know the time, the place, and what to expect. The only way to accomplish this aim was to advertise the affair, so the facilities of the local newspaper and two radio stations were used to spread the information.

Every day, starting four days before the event, 10 spot announcements went out over the air urging one and all to come to the City Gas Co.'s "open house." They were spaced at strategic intervals so as to reach both city and rural listeners.

Mr. Ray was most anxious to have those living in outlying district hear these advertisements. It was found that the 7 a.m. broadcast was a good time to catch their ear. At this moment the average farmer has completed his morning chores and is seated at the table eating breakfast. The family usually has turned on the radio to hear the early morning newscast. An announcement spotted during this period of broadcast commands their attenion.

In planning his ad for the newspaper, Mr. Ray elected to make a big splash. He decided that it was better to run one big spread than a series of smaller notices. So several days before the party was to take place, he purchased two full pages of newspaper advertising space. Here, in large type, he told the readers all about what was to take place. He explained that every guest would be served food cooked by LP-Gas. He promised to give prizes to holders of lucky registration numbers. He made a big point of spotlighting the time, the place and the date so that these important facts would be impressed on everyone's mind. It was an excellent

A portion of the display room of the City Gas Co. showing Tappan ranges, on one of which Mr. Ray cooked food for his party.

attention-getter that helped swell the total attendance.

Response To Advertising

The effectiveness of this advertising was proved by the fact that the entire personnel of the City Gas Co. was literally swamped in taking care of the crowd that showed up. The doors had hardly opened at 8 a.m. when a stream of people began to flow into the display rooms. The tide kept coming until the doors swung closed at 6 in the evening. During the interim, every visitor was served with baked ham and hot biscuits. Before the day was over more than 95 pounds of ham and dozens of pans of biscuits had been consumed.

Biscuits were made up before hand by a local bakery and kept refrigerated until time for use. They were delivered to the show room ready for the oven, and baked on the premises in stock ranges that were on display. The ham, which had been cooked the evening before, was also kept hot in the oven of a Tappan stove. The serving process continued without interruption all day long.

How Demonstrations Were Handled

In order to cook on the premises and to display the stoves in operation, three ranges were hooked up with bottled gas. The company employes who were stationed at the improvised kitchen pointed out to the guests the simplicity of the hook-up and the efficiency of the range. Questions ranging from: "How many hours would it take a cook stove to consume one bottle of gas?" to "What is the estimated cost of heating an average home with butane-propane gas?" were asked and answered.

As the people milled around the room they saw other ranges and heating units on display. On many of the stoves rested copper colored pots and pans which gave the room the home atmosphere.

At one place on the floor a propane furnace had been set up and connected to the gas line. The visitors were guided over to it so that they could see how this effective equipment operates.

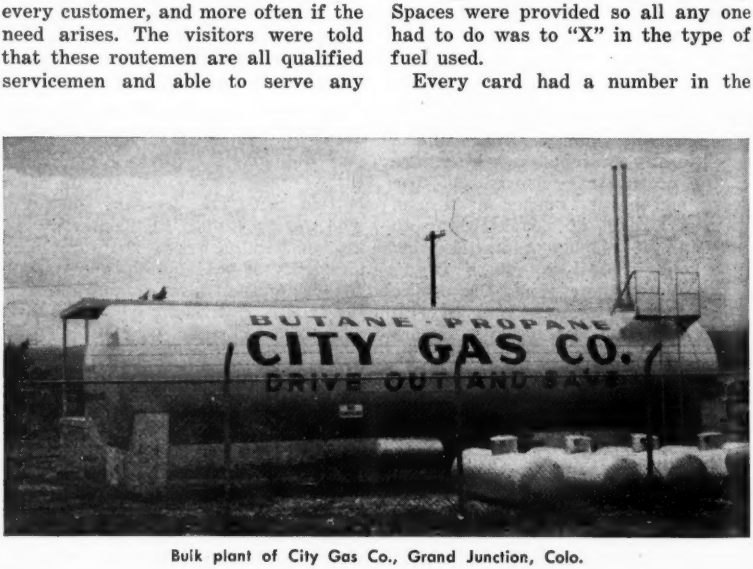
The entire selling personnel was on hand, and these employes circulated around the room keeping interest alive and answering questions. They recounted many times the story of the City Gas Co. They pointed to the large storage tanks and explained that they were the biggest on Colorado's Western slope. Because of the large storage capacity, it was explained that the company's customers were assured that the bulk plant would never run out of gas.

The guests were also informed of the services rendered by the company. It was revealed that trucks had regular service routes, and that one of these calls at least once a month on every customer, and more often if the need arises. The visitors were told that these routemen are all qualified servicemen and able to serve any need. It was also imparted that they keep accurate records of a customer's storage capacity and average consumption. Because of this, users of LP-Gas will not run out of fuel. This, and similar information, was disseminated throughout the entire day.

Since the whole purpose of the "open house" was to get the name and address of live prospects, everyone who entered the display room was handed a registration card and asked to fill it out.

A stock of these cards had been printed up beforehand. They were 3" by 5" in dimension. On the top of the card, lines were provided for the individual to inscribe his name, his address and his telephone number. In addition to this, every registrant was asked to answer three questions. These were whether or not they were now using coal, electricity, or gas for cooking, hot water and heating. Spaces were provided so all any one had to do was to "X" in the type of fuel used.

Every card had a number in the



Bulk plant of City Gas Co., Grand Junction, Colo.

upper right hand corner. The guest who signed up was given a slip corresponding with this number. This was for the purpose of conducting the drawing for prizes. At the end of the day 1800 visitors had signed a registration card.

How Prizes Were Handled

As promised in the advertising, every woman visitor was handed a gift as she entered the door. In each case this consisted of an attractive vase. Mr. Ray purchased these in wholesale lots in anticipation of a large turn-out and had enough on hand to fulfill his agreement with the public.

Numbers corresponding to those inscribed on the registration cards were placed in a box. Once every hour one of these numbers was pulled out. The visitor who held the original was awarded a piece of Revere Ware. This turned out to be a copper whistle kettle.

At the conclusion of the party, and when it was determined that a number for everyone who had registered was in the box, the lucky slip for the grand prize was drawn. Since this was a Tappan cooking range it was well worth winning.

Beneficial Results Of Party

The day after the party was over, Mr. Ray filed the registration cards away in his prospect box. He then set about to see that each name was systematically followed-up with a personal call.

To accomplish this, Mr. Ray gives each salesman 15 of these cards every morning. The salesmen are required to call at the addresses shown on the allotment. At night they report back to the office and tell what developed at each place. So far, the result of this type of solicitation has been most profitable. The records show that 10% of all those contacted have swung over to the LP-Gas equipment and are now using butane-propane gas.

The party was held late last summer. Up to the present time but one-third of the prospect list has been approached. This leaves 1200 still to see. At this early stage the profit from the venture figures as follows:

Including the advertising, prizes, and cost of food, Mr. Ray spent a little more than $500 on the party. The profits accruing from the sale of equipment and gas to registrants now is in excess of $5000.

It will be a long time before the total profits can be computed. This is so because the remaining names yet must be contacted; the new customers will furnish more leads from among their friends, and the sale and service will continue indefinitely to those who have converted.

One fact stands out above all others. It was a profit-making idea. Should sales slow up again at some future date, then Mr. Ray will hold another party.

Sunray Underground Storage Completed at Snyder, Texas

One of the largest underground projects employed in the storage of liquefied petroleum gases in the nation is in the operation adjoining the new Scurry gasoline plant of Sunray Oil Corp. and associates, located two miles northwest of Snyder, Texas. The new plant was dedicated Oct. 24.

Sunray as operator for itself and 30 other companies and 60 individuals in the Scurry gasoline plant, operates three storage "wells" which afford access to a man-made underground "savings bank" with a combined capacity of 3,700,000 gal. Sunray contemplates doubling the storage facilities within the next year.

Island dwellers the world over find butane a panacea for their fuel needs. In tropical Mayaguez, Puerto Rico, Americo Rodriguez, Inc., has two storage tanks with a combined capacity of 25,000 gals. to serve its hundreds of customers.

Must Solve Winter-Summer Ratio To Gain Industry's Full Potential

By P. J. HOAGLAND*
Warren Petroleum Corporation,
Tulsa, Oklahoma

IT would be interesting to know how many of you have taken the time and put forth the effort to closely analyze each of your individual customers with respect to the size of the system that the consumer needs. We have found, from discussing this problem with many of our dealers, that 25% to 50% of the consumers were causing most of the trouble of fuel shortage with a system that was too small. I know you have heard of this larger tank program before but I would like to mention some actual figures to show what has been accomplished which, I trust, will serve as an incentive for further progress of sufficient storage on the consumers premises.

P. J. HOAGLAND

We know that our domestic fuel problem is a seasonal business—one which requires what I refer to as an out-of-balance investment for storage, tank cars, and trucking equipment, to adequately supply the consumer demand.

I have been granted permission by W. G. Petty, your state association president, to review some of his figures and show the problem with which he was confronted when the industry first started talking ratios. Five years ago his average storage was slightly less than 300 gallons per customer. Today his average is 638 gallons per customer and of the 1100 accounts he is now serving, only 50 remain that need supplemental storage.

I would like to point out that this was accomplished without the aid of any industrial business or tractor conversions, but was brought about by a careful study, coupled with hard work, on strictly a domestic load. His requirements can now be supplied on a 1½ to 1 ratio, which formerly was 3 to 1, and it is anticipated that by next year the load will be on a 1¼ to 1, or possibly 1 to 1.

Don't say it can't be done! Other dealers throughout the country are making large inroads into this ratio bugaboo and it is clearly evident among many accounts that further progress is being made. It is problematical as to whether or not the LP-Gas industry will completely eliminate ratios so that production will be in complete balance with demand.

Sometimes our vision becomes blurred looking too closely at our own problem and not taking a broad-

*A paper delivered at the annual meeting of the Tennessee LP-Gas Assn.

er perspective of the overall picture. In the domestic field we should make sure we have on our glasses, as other industries are requiring more and more of the same hydrocarbons that you deliver to Mrs. John Doe for use under her teakettle. These growing industrial requirements, to mention a few, are in the form of high octane fuels, chemicals and synthetic rubber. It would be well here to state that chemicals manufactured from LP-Gas include alcohols, plastics, resins, glycols, detergents and special solvents. LP-Gas hydrocarbons used for chemical manufacturing totaled an estimated 650,000,000 gallons during 1950 which is an increase of 19.3% over 1949 and second only to domestic sales. These industries offer a very attractive market to the producer, due to the uniformity of their monthly requirements, but no more so than the distributor serving the domestic field, once that distributor has overcome his excessive winter ratio.

Producers Have Storage

You often hear the remark of "let the producer put in the storage." That's what we are doing, but only as far as the law of economics will allow. During the past three years, we have installed four terminals, that in the aggregate total 260 propane storage tanks that have a water capacity of 30,000 gallons each, or a total net storage of approximately 7,000,000 gallons, which we are further increasing. The S.S. "Natalie O. Warren," that plies between Houston and Newark, N. J., was converted from a dry cargo vessel and equipped with vertical tanks for a net capacity of 34,000 barrels—the equivalent of 140 tank cars of propane. Two barges, "The City of Mobile" and "The City of Lake Charles" are now in service and each have a net capacity of 320,000 gallons. One more barge, "Panama City," will be in operation yet this year and will have a net capacity of 360,000 gallons.

All of you are interested in the advancement being made concerning the industry's latest development, namely, underground storage. We now have one underground cavern and three more in varying stages of completion. These underground reservoirs will total about 7,000,000 gallons, which we expect to double or triple by next year.

Storage Increasing

Company-owned plant storage and that of other manufacturers, with whom we are contracted, totals 16,500,000 gallons of available storage at the production centers. During the past 12 months we have ordered 800 additional propane tank cars and the completion of this order will make a total of 2203 high pressure cars suitable for the transportation of LP-Gas products. This represents an investment of about $30,000,000 in our LP-Gas division and does not include any figures for the manufacturing division in the way of plant equipment or storage at these plants. Other producers are also expanding their facilities, both underground and aboveground steel storage, together with augmenting their tank car fleets —either leased or company-owned.

We must make a reasonable return on our investment, the same as you, as dealers, must realize a profit from your capital expenditures. I heard a dealer recently remark that he actually needed two delivery trucks during the summer and eight during the winter. He was operating six and confronted with idle equipment and a loss in man-hours. For your own benefit, you should be untiring in your efforts to overcome this difficulty or improve your position as much as

possible. Additional taxes have added to the burden and there is no indication that our present defense program will allow any tax reductions for a good many years to come—possibly not within this generation.

Take a typical example of a distributor operating on a 1½ to 1 ratio, with requirements of 12 to 18 cars per month. For the 12 cars shipped during the so-called summer months, it means having eight cars in that dealer's service, assuming that the eight cars will average one and one-half trips per month. The ducks go South and the snow falls and that same dealer requires 18 cars which again, on the 1½ trips per month, finds the producer needing 12 tank cars to furnish the 1½ to 1 ratio, or 18 cars per month.

Idle Tank Cars Don't Pay

In round figures this represents an investment of approximately $40,000, or $10,000 per car, for the four additional tank cars needed and we have not found a CPA that can prepare a financial statement showing where we derive any revenue from idle tank cars. In addition to our transportation difficulties, we must also maintain storage to be able to supply, as much as possible, this additional increase in volume which is brought about by the winter demand. You can readily appreciate that the producer cannot justify the investment required to completely solve this dilemma. The solution will be the combined efforts of the producer, distributor AND consumer. With sufficient storage the transportation facilities, both tank cars and trucks, will to a large degree solve their own problem.

Take a moment or two to look at some production figures and see what has been done in the past and what can be expected in the future. For the year of 1942, the marketed production of LP-Gas was 585,400,000 gallons. I refer to 1942 because that is the first year the industry went over the one-half billion gallon mark. This compares with the estimated total of 3,333,000,000 gallons for the year of 1950. During this nine-year span, there have been varying percentages of increase over each preceding year, which ranges from a low of 5.9% to a high of 42.4%.

While on the subject of growth, it is interesting to note that the supply of LP-Gas is ahead of demand—on an annual basis. Additional quantities will be produced this year, as new plants have been constructed and others are in various stages of completion, which for the industry will bring an estimated daily increase of 1,000,000 gallons from natural gas. This does not include any production from refinery sources.

Situation Improved Over '51

Our industry, as a whole, should be in much better position for the winter of 1951 and 1952 as far as LP-Gas supplies are concerned, provided new tank cars now in order are delivered on schedule. Tank car manufacturers assure us, however, that steel will be received for completion of our orders. No doubt they have given the same encouragement to other purchasers of new tank cars, but if these cars fail to arrive, then you better pile the wood high and keep the ax sharp. It is not my intention to be alarmist, but we definitely need these additional cars, and I would be misleading if I stated otherwise.

In regard to ratios, there is no doubt that underground storage and steel storage will improve the supply problem, but we are still going to be confronted with our transportation

needs, both tank cars and trucks. When you are operating a business that has seasonal demands, this problem will always be with you in varying degrees. The present ratio of 1½ to 1 is based on simple arithmetic. We keep a 12 months forecast on all of our customers, which is revised every month. Our analysis of production compared to the demand discloses that we will have quantities which can be supplied on this 1½ to 1 ratio.

All Conditions Not Predictable

As we know from past experience, abnormal conditions do arise. You cannot forecast floods, with the resultant washouts. You cannot look into the crystal ball for an answer to railroad strikes. You cannot foresee plant freeze-ups and mechanical difficulties, which decrease production. Last, but not least, you cannot forecast explosions. Briefly, this all adds up to trouble and you cannot predict trouble.

Whether future ratios will be 1.6 to 1, 1.39 to 1, or 1.25 to 1, it is impossible to foretell. We do know that some major producers are thinking of reducing the present ratios, but time alone will give the answer as to the feasibility of diminishing the gap between the present 1½ to 1. It is a certainty that any dealer who reaches the Utopia in this industry—a balanced load—places himself on the preferred list and will be in a better bargaining position with suppliers competing for his business.

On a recent trip to Iowa, I noticed a staked truck that passed with a load of cylinders. What I am about to say would also apply to a bobtail truck or transport with a load of gas. The thought occurred to me—what a story we have to tell of the myriad number of operations that are behind that few gallons of LP-Gas and the millions of dollars of invested capital that made it possible—your dollars and ours.

There is the engineering and planning for the construction of the plant; the gas contracts for the raw gas; the records to be maintained for the payment of the royalties on this gas; the pipe to be purchased and layed for the gathering system; the equipment to be bought and installed for the extraction; the storage tanks needed; the tank cars; the trucks; the system or bottle for the consumer, along with the heating equipment, ranges, lighting, hot water tanks and refrigeration; the special equipment and fittings that are needed; the thousands of jobs made possible—engineers, chemists, plant operators, salesmen, truck drivers, installation men and our right arm—the faithful secretary.

There is also the increased revenue for the railroads and the thousands of trucks that would not otherwise be in operation.

There is a powerful punch behind that few gallons being delivered to Mr. and Mrs. America, so that they can enjoy the convenience and comfort which you daily bring. When you get through they will probably think they are getting their gas too cheap and will want you to raise the price.

Panel Will Discuss Underground Storage

Underground storage of natural gas will be featured at a panel discussion during the winter meeting of the Interstate Oil Compact Commission on Dec. 11-12 in Little Rock, Ark.

Engineering and legal committees will arrange the panel which will cover both legal and engineering problems involved in setting up and operating underground storage reservoirs.

Dealer Finds New Sales Fields When Natural Gas Moves In

By ZOE JOHNSON

"NATURAL gas is a good advertisement for propane," says Joe Alexander, plant and route manager of the Blytheville Propane Corp., Inc., of Blytheville, Mississippi county, Ark. "When farmers come to town now they hear gas talked on every corner, for natural gas will come to Blytheville this winter. Knowing that everyone in Blytheville will soon be enjoying the convenience of gas makes the rural people just a little more anxious to be as modern as their neighbors in town."

The Blytheville Propane Corp. was organized in 1948 with A. R. Olson, general manager. Paul D. Lawrence, installation manager, has been with the concern since its beginning; also, in one capacity or another, has Joe Alexander, now plant and route manager.

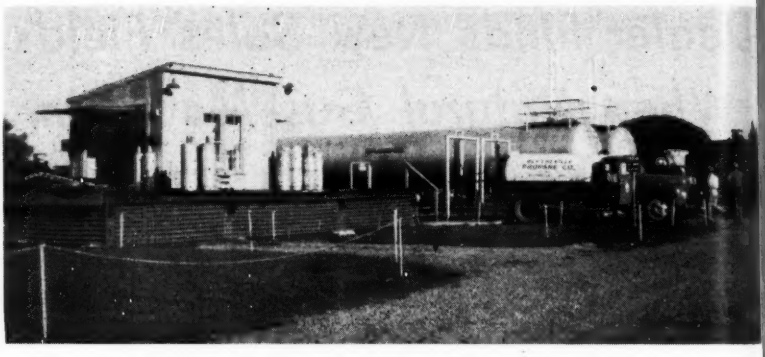
In five years Blytheville Propane has grown into an attractive, efficiently managed plant, and one of the largest in Arkansas. Every inch of the half-block grounds is geared to efficiency, and velvet-clipped lawns skirted by gravel driveways give Blytheville Propane the appearance of a small park.

Mississippi county runs to "size" in a lot of ways. With an area of 919 square miles it is one of the largest counties in the state, lying in the fertile Mississippi valley; it is the largest cotton producing county in the world and has the largest cotton farms—vast stretches of country that only a few years ago were dense wilderness.

This prosperous country is ideal territory for the butane industry and though natural gas is coming to several towns scattered over the county, these gas mains can never touch the rural districts. And as Mr. Alexander says, this only makes rural people more conscious of the convenience of gas.

Loss of town customers that will come this winter when Blytheville's natural gas lines are put in operation, Mr. Alexander says, is now being offset by the growing conversion of farm tractors and other farm machinery to butane. More conversion, bringing in more rural customers, is their way of meeting natural gas competition—that and making prospective

Paul Lawrence, installation manager for Blytheville (Ark.) Propane Corp.



Bulk plant and cylinder filling station of Blytheville Propane Corp.

customers realize that they can have the same comfort and convenience from butane that town people have from natural gas.

Tractor conversion is now taking four-fifths of their summer load. While many country families are still using propane only for cooking, keeping their 80-100 lb. bottles filled plugs another big gap in the summer load.

Their initial charge to a customer for converting a tractor is $56 and they are prepared to make repairs on any breakdown of farm trucks, tractors, and other machinery.

Besides the great saving of the cheaper fuel, conversion saves the farmer 50% on oil consumption and from one-third to two-thirds on repair expense of farm machinery.

Blytheville Propane is now servicing between 125 and 150 tractors. On large farms that run into thousands of acres in Mississippi county, several tractors running every day eat a lot of propane. Smaller tractors consume from 15 to 20 gallons per day and the larger ones 40 to 50 gallons per day. On some farms where there are several tractors running they deliver from 20 to 25 bottles daily. There are farms that use from 2000 to 3000 gallons of fuel weekly for tractors alone.

Propane for fuel cuts their expense at least one-third and in some cases one-half. On a 2000-acre farm the saving from conversion is enough in one season to buy a new tractor.

Even with conversion, the fuel bills of these large plantations run into thousands of dollars a season. Thus, the loss of town dwellings to natural gas is a very negligible factor to the Blytheville Propane Corp.

Their largest customer is the R. D. Hughes cotton gin in Blytheville which is also the largest gin in Mississippi county and gins on an average of 15,000 bales per season.

Also, new installations of some kind are made every week and the peak of calls for new installations will begin in October and run through December. Thus, year after year, more people install butane and Mr. Alexander says he can see no saturation point for the butane industry.

Mr. Alexander makes efficiency the

pivot on which the Blytheville plant turns—efficiency in every department. And efficiency calls for orderliness.

Every pipe line and piece of machinery shines with new paint. A closet stores paint brushes and buckets out of sight. Workmen making repairs about the place must clean away all shavings and debris from their work. In the appliance and parts storage room there is the order of a department store. Every nut and bolt and fitting is in its bin and a mechanic can tell in a moment if the needed part is out of stock and what repair stock needs replenishing.

Showroom Made Attractive

Ranges and other appliances are so placed that a customer can be taken through and shown the different brands on display with no more inconvenience than in a furniture store. Floors are clean and there is never any clutter about the doorways or scattered over the lawn.

New landscaping plans for the plant grounds will include a barbecue pit and tables for summer parties of the employes. The management believes in knowing its employes in a friendly, personal way and helps straighten out any private troubles of their men that may be cutting down their efficiency. Sudden sickness or prolonged illness in a man's family, Mr. Alexander says, can cut into a man, but if he is assured of help and understanding he can carry on and makes a better employe than ever. Payment of employes is on an incentive basis and each employe is paid according to what he accomplishes.

Further plans in the plant landscaping call for maples to be set along the graveled roads and removing of two large gin storage tanks that were on the property when it was purchased by Blytheville Propane.

This plant beautification and efficiency is only a reflection of the practice of efficiency striven for in service to customers — filling a call for fuel the hour it is received if possible; making immediate adjustments for any deficiency that sometimes does happen in installations; giving the best and quickest service on machinery repairs and reconversions.

To make customer service more economical, Blytheville Propane has two sub-stations, one at Luxora, Ark., and one at Steele, Mo. This gives them a radius of approximately 25 miles for their longest hauls and greatly increases the territory they can serve.

Storage capacity in Blytheville is 60,000 gallons, and at Luxora and Steele, 18,000 gallons each.

It is this five-year program of constructive policies and good service that makes Blytheville Propane welcome natural gas, not as a competitor, but as a good advertisement for the propane it sells.

Gas Near Foot of List Of Fire Loss Causes

Gas and gas appliances stood 20th on a list of 25 causes of fire losses in the United States during 1950, according to a report recently issued by the National Fire Protection Assn. Out of a total of 600,000 fires causing aggregate losses of $699,600,000 during the year, only 7800 fires with total losses of $9,000,000 were attributed to gas and gas appliances.

Smoking and matches headed the list of fire causes last year, as being responsible for 93,000 fires and losses of $55,000,000. Electrical—fixed services, fires due to misuse, or faulty wiring and equipment—was named by the National Fire Protection Assn. as second on the list, causing 53,700 fires and a total loss of $73,000,000 in 1950.

Profit Or Loss?
Your books should give the answer

By JOHN A. ACKLEY
Assistant Sales Manager, Pyrofax Gas Co., New York City

HOW many of you* remember the old "Two Hook System" of doing business? Then, the owner knew all his customers. He sold for cash or maybe extended credit until the end of the week. He kept track of things on two hooks. What he owed on one—what they owed on the other. Then at the end of the month, he totaled up the two hooks, checked his bank account, and determined his profit. That's all there was to it. In those days, business was really quite a lot of fun.

But today the "Two Hook System" is long gone. Business has been complicated by a lot of federal, state, and local regulations—further complicated by the demand for almost unlimited credit; keen competition from an ever increasing number and type of competitors. Inflation has brought high and increasing costs, and added to all this is the National Emergency with its shortages and uncertainties. So, today your job of maintaining adequate profit margins between costs and income requires a great deal more than mere guessing.

Actually what you need is something to take the guess work out of your business. You need something to give you the facts. The answer is a good accounting system, because only through the records it provides, can you see the result of all your policies and operations in terms of dollars and cents.

For instance, you may feel sure a 50% mark-up on appliances is enough to cover all your expenses, and still show you a fair profit—you may be just as certain the most economical way to deliver gas is with two men on a truck—you may be just as sure some labor-saving tools will improve your efficiency—they probably will, but you are never certain until you see it in black and white at the end of the month.

I mentioned tools. Your accounting system is just one of the many tools in your business, but without any doubt it is the most important of all, for its function is to control and assure the proper and efficient use of your money. When we think of tools, we think of the things they enable us to do—and that's what I'm going to talk about today—the services your accounting system can perform for your business.

However, I want to explain, this isn't in any way supposed to be a technical discussion of accounting. We don't care about any particular system or the merits of it. Instead it's to be a discussion of the uses of your system in everyday, down-to-earth language, all of us can understand.

Usually, a little ahead of the beginning of a new year, we all get ambitions about the things we'd like

*An address to the North Eastern District, LPGA, New York City, Oct. 11.

to accomplish. In our business, they usually take the form of the number of new installations we'd like to make, and the profit we want at the end of the year. Generally, that's about as far as it goes; sometimes they get accomplished, and sometimes they don't. To get the job done, it's necessary to plan ahead and ask yourself questions similar to some of these:

Have I actually studied and planned how I'm going to sell and install the number of new jobs I want during 1952? Do I know what mark-up on appliances will give me the profit I need? What is the situation in regard to my personnel? Can I do it with my present employes? Do I have sufficient capital, or will it be necessary for me to go to the bank and borrow money? Am I in a position to borrow money? Can I show the banker I've made progress year after year? The point is, these and many other questions must be answered before the job can be done.

Now, just what is your accounting system designed to do for you? Obviously, it should supply you with such things as your Net Profit and your Net Worth. Also, Financial Statements, and the facts necessary to prepare tax returns of all types. But that's only the beginning. It can guide and control your operations throughout the year by providing figures on sales, stock on hand, mark-up and expenses. It should be the basis for your decisions, to insure a fair return on the capital you have invested. Briefly, it should help you to make more money.

TABLE 1. PROFIT AND LOSS STATEMENT

	1949
NET SALES	$39,300
Cost of goods sold	28,300
Gross profit	11,000
Operating expenses	
Selling	4,750
Administrative and general	2,650
Financial	100
TOTAL EXPENSES	7,500
Net operating profit	$ 3,500

TABLE 2. PROFIT AND LOSS STATEMENT

1949	Amount	% of Sales
NET SALES	$39,300	100
Cost of goods sold	28,300	72
Gross profit	11,000	28
Operating expenses		
Selling	4,750	12.1
Administrative and general	2,650	6.8
Financial	100	0.3
TOTAL EXPENSES	7,500	19.2
Net operating profit	$ 3,500	8.8

A profit and loss statement is shown in Table 1.

The reason for having one of these is to find out where you are going. To see if you're making money, and if it's enough. But, we can learn a great deal more from this statement if we develop the items in terms of percentage of total sales. An example is Table 2.

Then, if we get one more figure between the cost of the goods sold and the selling price, we can see the mark-up obtained. In this case, the Gross Profit amounted to $11,000,

which is 39% on the cost of the goods and 28% on the selling price against which all of your expenses must be applied.

Just these few extra figures tell us a great deal more about the business. We see after everything has been paid for, and the expenses deducted, we have a profit of $3,500, or practically 9 cents on every dollar's worth of sales. It further tells us that just as long as this volume is maintained, goods are marked up 39%, and expenses are kept at their present level, we will continue to make practically 9 cents on every dollar's worth of goods we sell. If you buy a gas range for $100, you'll sell it for $139, and earn a profit of $12.23 after all expenses have been met, and not $39, which is the mark-up placed on the range.

Looking at it from the other side, if your sales are off, or you take a lot of trade-ins, your profit will shrink, unless at the same time, your expenses are correspondingly reduced. There is a definite relationship between sales, expenses, and net profit, and you must maintain it if your business is to move steadily ahead.

Now, if this profit isn't adequate, what can be done to increase it? For one thing, you can use a more realistic mark-up. In this case, a 60% mark-up would have increased the gross profit by nearly $7,000, and your net profit could have easily been doubled. You could sell a higher grade of merchandise. It might take more selling, but maybe two ranges of higher quality would bring a greater income than three low priced models. You could reduce your expenses through greater efficiency or, if that isn't possible, you might have to move to a less expensive location.

A third alternative is to stay where you are, maintain your existing expenses, continue to mark your goods up 39%, but through more sales effort increase your volume. In this way, you spread your fixed costs over

TABLE 3. PROFIT AND LOSS STATEMENTS FOR 1950 AND 1949

	1950	1949	Increase Percent 1950 over 1949	Percent of Sales 1950	Percent of Sales 1949
NET SALES	$49,200	$39,300	25.0	100	100
Cost of goods sold	34,100	28,300	21.0	69.3	72.0
Gross profit	15,100	11,000	37.0	30.7	28.0
OPERATING EXPENSES					
Selling expenses	6,450	4,750	35.6	13.1	12.1
Administrative & general	4,575	2,650	72.6	9.3	6.8
Financial	140	100	40.0	0.3	0.3
TOTAL EXPENSE	11,165	7,500	48.8	22.7	19.2
NET OPERATING PROFIT	$ 3,935	$ 3,500	12.4	8.0	8.8

more units, and a greater profit will result. Any one of these three alternatives, or a combination of them, will bring a greater return, but just as long as you make no changes your profit won't increase.

Now, let's assume this is your 1949 statement. What were the trends in these items in 1950? Was your business managed as well last year as it was in 1949? Obviously, this involves a comparison, and the best way to see the changes is to make up a comparative statement. There's one for the two years in Table 3.

The first column of figures is the 1950 statement, and the fourth column shows these items expressed in percentages of the total sales for 1950. The second and fifth columns are the figures we have been talking about for 1949. This center column shows the percentage increase of these items in 1950 over the year 1949.

We see you did $39,300 in 1949, and you made a profit of $3,500, which is 8.8%. In 1950 you did 25% more business, and you made $435 more, or 12.4% more than in 1949. Now what were the reasons for making only half of the expected increase in profits? It wasn't your mark-up, for the gross profit was greater in 1950 by nearly 3%, but something happened to increase your expenses by nearly 50%. The administrative and general expenses were the big offenders as they went up over 70% and wiped out half of the anticipated profit. Here again, we see the definite relationship between sales, expenses, and profit, and the need to control them at all times.

We all know you've got to do more business if you want to make greater profits, but we must never lose sight of one important fact. You can't do it by merely selling more. You must do it at a mark-up you know is profitable. Don't sacrifice your investment in overhead, appliances and profits just for the sake of doing more business.

Now let's take a look at the second basic record of your accounting system—the balance sheet (Table 4).

TABLE 4. BALANCE SHEET 1949

ASSETS	
Current assets	$12,200
Fixed assets	14,100
Other assets	2,100
TOTAL ASSETS	28,400
LIABILITIES & NET WORTH	
Current liabilities	4,000
Fixed liabilities	8,000
NET WORTH	16,400
TOTAL	$28,400

It's divided into two parts. On one one hand, you have the items you own—cash, accounts receivable, inventory, trucks, buildings, etc. On the other hand, are the financial obligations to others; money due for merchandise, notes, mortgages, etc., and the difference is the Net Worth, or the value of your business. We make up this Balance Sheet to give you a statement of your business at regular intervals, and to submit to your suppliers in order to obtain credit. These are the two most common reasons, but just like the Profit and Loss statement, it has many other uses.

For one thing, we can learn something about the money available to operate the business. The money you need to pay salaries and wages; to buy gas and oil for your trucks; to pay for parts and inventory, and to extend credit to your customers. We call this working capital. That's the money left over when you apply the

total amount of what you owe within 30 days against the cash and what you expect to turn into cash within that same period of time. On the Balance Sheet these items are shown as current assets, and current liabilities. To determine the amount of working capital available, we subtract one from the other. In this case it is $12,200 minus $4,000, or $8,200.

This brings up the question of how much working capital is needed. Naturally this varies with every business, and without all the facts no blanket figure can be given. But to determine the minimum requirements, check your records, and see when you had the greatest investment in inventory and accounts receivable. At that time, the current assets minus the current liabilities is the smallest amount with which you can operate and keep current because this is the time when your greatest amount of working capital is tied up.

Two Sources of Capital

At times you may find you need more working capital to operate your business. If you do, two sources are open to you. One is to initiate policies which will turn more of your accounts receivable and inventory into cash. This probably means a more efficient collection policy and a reduction in inventory. If you can't, or for various reasons you don't want to change these items into cash, then you must borrow money. In the event you are contemplating a bank loan as a source of more working capital, the best way to get your bearings is to think of the loan as a piece of equipment for your business. If the use of it will increase your efficiency by more than the cost of the loan, you are wise to borrow, as with it you will be able to operate freely, take all your discounts, pay your bills in accordance with your suppliers' terms and keep a good credit rating.

On the other hand, if you can't increase your efficiency by more than the cost of the loan—don't borrow—but take the other course of turning some of your inventory into cash, and speeding up your collections so as to get more working capital. This second course will also enable you to keep a high credit standing.

Can You Pay Your Bills?

On your present basis of operations are you able to pay your bills in accordance with your suppliers' terms? Because the ability to pay is dependent on the amount of working capital available, we refer back to these same current assets and current liabilities. To quickly establish your ability to pay, we work out a comparison by dividing the liabilities into assets as shown in this example:

$$\frac{\text{Current assets} \ldots\ldots \$12{,}200}{\text{Current liabilities} \ldots \$\ 4{,}000} = \$3.05^*$$

Now, the rule of the thumb is at least 2 to 1 is satisfactory, because it allows an extra dollar in cash, or what you expect to turn into cash within 30 days, to pay what you owe in this same period of time. This extra $1 is normally enough, but to be absolutely sure, you should check your cash position more closely. We do this by what is called the Quick or Acid Test ratio where we exclude the inventory from the current assets, and we get our comparison between only the very liquid assets—cash and accounts receivable and the same current liabilities—as shown in this ratio:

*For every dollar in current liabilities, you have $3.05 in current assets.—Editor.

Quick assets ..... $6,000 = 1.5

Quick liabilities..... $4,000

The rule of the thumb here is at least 1 to 1 is safe, for it assumes your collection policy is efficient enough to keep money coming in fast enough, to meet obligations due within 30 days, even if nothing is sold from the inventory.

You ought to work out these two ratios together, for it is very possible the same Balance Sheet could show one to be satisfactory, and the other unsafe. To illustrate this, see a section of the Balance Sheet (Table 5) showing the three main items of which current assets consist.

In this instance, the current ratio would be $20,000 over $7,500, or better than 2½ to 1, which is satisfactory. But look at the Quick Ratio—the liquid assets of cash plus accounts receivables are only $5,000, and the current liabilities are again $7,500. This is only 2/3 to 1. Clearly, this business will experience great difficulty in paying bills. It can't pay them unless a miracle happens because $7,500 is owed within 30 days, and only $1,000 in cash, and up to $4,000 in accounts receivable are available to pay them. Even if all the money due is collected, we are $2,500 short.

The big difficulty here is this business is top heavy in inventory. Over 60% of the working capital is tied up in merchandise, and unless something is quickly done to get more cash in the business, bills can't be paid on the creditors' terms; your credit rating will suffer, and none of us can afford that luxury today. The answer is obviously to reduce the inventory by at least $2,500, and keep it available in cash for operating the business.

This poor cash position isn't always the result of too much inventory. Just as frequently the receivables get out of line. In other cases, both the receivables and the inventory get top heavy, and then it's necessary to reduce both of them at the same time, to get the business in a sound operating condition.

What about your collections? Are they adequate for your business? As an illustration, suppose you had sales of $49,200 during 1950 (from P & L Statement), and at the end of the year your receivables stood at $5,850 (from Balance Sheet). A comparison between these two would be shown in this ratio:

Sales ..... $49,200 = 8.4

Accounts receivables.. $ 5,850

This shows your sales are about

TABLE 5. CASH POSITION

Cash	$ 1,000
Accounts receivable	4,000
Inventory	15,000
Total current assets	20,000
Total current liabilities	7,500

Current Ratio

Current assets = $20,000 = 2.7
Current liabilities 7,500

Quick Ratio

Quick assets = 5,000 = 0.66
Quick liabilities ..... $ 7,500

eight times the amount of the receivables on the books. The average period represented by the unpaid accounts is about ⅛ of a year, or 40 days. If your credit terms are 30 days, your collections are running 10 days behind.

Let's take another example. Suppose your accounts receivables are $15,000, and your average monthly sales are $5,000, or $60,000 per year. Here's how you show the ratio:

Sales .....$60,000 = 4

Accounts receivables..$15,000

Don't Tie Up Capital

In this case, your sales are four times your receivables. The average period represented by unpaid accounts is ¼ of a year, or 90 days. With credit terms of 30 days, your collections are 60 days behind. If such a condition exists you must go after collections without delay because $10,000 of your valuable working capital is tied up in bills owed to you.

Let's put this on a monthly basis. Suppose you did $4,000 in December and another $4,000 in January. By the end of January a good collector will have only the January business on the books. December will be entirely paid, and he'd have only one dollar on the books for every dollar of sale. But if you have $6,000, a $1.50 is outstanding for every $1 of sale. It's a signal you're slipping; you'd better have unlimited capital, or you can't pay your bills.

If you're selling a particular type of customer such as crop farmers who want to pay you after the crop is sold, and you know the money is good from years of experience, then you definitely have to plan at the time you sell this customer to have enough working capital to take care of it. Your suppliers can't be expected to supply the capital for you to "carry" this type of customer.

Collections are a most important part of your business. No sale is completed until it is paid for. When people owe you money you can either collect it, keep a friend, and his business, and be able to pay your bills, or not collect, lose a friend and his business, because he will avoid you and not be able to pay your bills. Remember, no one but yourself will ever collect the money owed to you.

Another point on collections. Prices and wages have recently been frozen. Taxes are sure to increase. Your customers already owe a great deal of money on furniture, automobiles, television sets and other appliances. As a result they will have less money available to pay bills. You need a good collection system to get there first.

Inventory Shows a Lot

How many times does your inventory turn over in a year? You can learn a great deal about your efficiency in purchasing, handling, and selling of appliances from it. Suppose your Balance Sheet shows the average inventory during 1950 was $12,500, and the Profit and Loss Statement shows the cost of the goods sold was $37,500. Your merchandise turnover would be figured in this way:

Cost of goods sold.....$37,500 = 3

Inventory (average)....$12,500

This shows your stock turned over an average of three times during the year. It further shows, you have enough money invested in merchandise to do four months' business, and your stock on the average is four months old. Some of it is probably much older, and getting obsolete. If

you could confine your purchasing more closely to the items you sell, and step up your selling program, perhaps you would need to carry only two months' supply, and you could turn it six times. In other words, if you turn over your stock twice as fast, you need only half as much money tied up in merchandise.

Maybe it's sufficient to figure your turnover on all the merchandise combined. But if the average is low, break it down into the different types you handle, so as to spot slow-moving goods you want to push or discontinue entirely.

Every one of you has a business which you've been operating for several years. You know you're doing more business each year, but have you ever checked up to see how much of it is yours, and how much of it belongs to the bank and the suppliers from whom you buy? Naturally, every business constantly has liabilities, as capital is borrowed for expansion, and because you don't pay cash for everything you buy. But the goal we all seek is to own more of the business each year, and in time to own it all except the money required for current purchases. If you're interested in what's going on along these lines just refer to your Balance Sheet, and write down the total liabilities. Underneath it put down the net worth of the business as in these examples:

1949	
Liabilities	$12,200
Net worth	$16,400
1950	
Liabilities	$10,000
Net worth	$18,000

We see in 1949, the value of the firm was $16,400, the total amount owed was $12,200. In 1950 the position was improved because only $10,000 was owed, and the value of the business had gone up to $18,000. This is very definite progress. Your share of ownership has increased, and this trend should continue to the point where you own all of it except the current obligations necessary to do business.

This change in your share of the business, in many cases, accounts for what otherwise may have seemed a smaller profit than you anticipated when you had a good year. Instead of putting it in your pocket, the profit went into the business in the form of assets which you own now instead of the bank or your suppliers.

Where Are You Going?

The accounting system you have is like a road map, which tells you how to go from one place to another. When you are planning a long automobile trip you first sit down and look at the map to see if the road you want is open. Then, when you get going and come to a fork in the road you don't guess whether to turn left or right, but you look at the map and turn as indicated. If you run into some unexpected construction, you don't merely step on the gas and go blindly ahead. Instead, you slow down, watch for directions and turn accordingly. Sometimes a dirt road looks like a short cut, but you don't take it because you know you'll lose time and perhaps go off into the ditch.

And that's the way it is with your business. Your long trip is the year ahead, and when you plan it, your first step is to sit down, with the map, your accounting records, to see if the road to profit is open. When you come to the end of the month, you don't guess whether you're making profit, but you look at records to find out definitely.

PRACTICAL MANAGEMENT

OF AN LP-GAS BUSINESS

CHAPTER 9

Pricing LP-Gas By The Pound

"Progressive" And Other Methods

IN the preceding chapter some mention was made of the progressive method of pricing gas when it is sold by the pound. In order that there may be continuity in our thinking, the same competitive electric rate will be used as in Chapter 7. It will also permit us to make reference to Tables 10 and 11.

Table 13 has been compiled for the benefit of those selling by the pound and who wish to use the progressive method of cylinder pricing. Remember that in this method of pricing, the customer goes back to a high price at the first of each calendar period or each Price Scale year. Don't be alarmed at the Adjusted Price of $4.70 in the larger quantity bracket, for this price schedule amounts to practically the same thing as the Flat Pricing Table No. 12 insofar as the dollars and cents which you will receive are concerned. Take a look at Table 14 or try making a few comparisons yourself if you are not convinced.

The principal advantage of progressive pricing is that you are sure of being paid the correct price for the quantity of gas which you are delivering, whereas under the flat pricing method you gamble upon the quantity which the customer may use and rarely hit the correct amount.

If you do not have close control

By C. C. TURNER

TABLE 13. PROGRESSIVE PRICING METHOD.

Suggested bracketed price list for propane gas in 100 lb. cylinders in competition with electricity at 5c per KWH for 15 KWH, 2c per KWH for 130 KWH, and 1c per KWH for all over that amount. Cooking energy ratio 4.75 KWH to each pound of propane for equivalent of 100 KWH used in cooking. Balance at an energy ratio of 4.67 KWH to 1 lb. of propane.

A. Cylinder being delivered in price scale yr.	B. Total yearly fuel bill per Column L Table 10	C. Customer has paid up to this delivery	D. Difference this being price of cylinder being delivered	E. Suggested adjusted price	F. Suggested bracketed price
1	$15.36	$00.00	$15.36	$15.35	$15.35
2	25.44	15.36	10.08	10.10	10.10
3	32.64	25.44	7.20	7.20	7.20
4	37.92	32.64	5.28	5.30	5.30
5	43.20	37.92	5.28	5.30	5.30
6	48.48	43.20	5.28	5.30	5.30
7	53.76	48.48	5.28	5.30	5.30
8	59.04	53.76	5.28	5.30	5.30
9	64.44	59.04	5.40*	5.40	5.30
10	69.72	64.44	5.28	5.30	5.30
11	75.00	69.72	5.28	5.30	5.30
12	79.68	75.00	4.68	4.70	4.70
13	84.48	79.68	4.80*	4.80	4.70
14	89.04	84.48	4.56*	4.60	4.70
15	93.72	89.04	4.68	4.70	4.70
16	98.40	93.72	4.68	4.70	4.70
17	103.08	98.40	4.68	4.70	4.70
18	107.76	103.08	4.68	4.70	4.70
19	112.44	107.76	4.68	4.70	4.70
20	117.12	112.44	4.68	4.70	4.70
21	121.80	117.12	4.68	4.70	4.70
22	126.48	121.80	4.68	4.70	4.70
23	131.04	126.48	4.56*	4.55	4.70
24	135.72	131.04	4.68	4.70	4.70
25	140.40	135.72	4.68	4.70	4.70
26	145.08	140.40	4.68	4.70	4.70
27	149.76	145.08	4.68	4.70	4.70
28	154.44	149.76	4.65*	4.65	4.70
29	159.12	154.41	4.71*	4.70	4.70
30	163.80	159.12	4.68**	4.70	4.70

Notes For Table 13 On p. 68

Notes: Broken lines (. . .) are to assist in reading table. Solid lines (———) are divisions between price brackets.

* Variation from average because of going to nearest cent in some part of the calculations in Table 10.

** A transition price between this and the next price bracket. From 40 cylinders through 1000 the price figures almost without exception $4.688, so $4.70 has been selected as the Suggested Bracket Price, and the $4.70 bracket runs from 12 through 1000 cylinders.

RE-CAP OF PRICE LIST

1st cylinder in Price Scale Year	$15.35
2nd cylinder in Price Scale Year	10.10
3rd cylinder in Price Scale Year	7.20
4th through 11th cylinder in Price Scale Year	5.30
12th cylinder through 1000th cylinder in Price Scale Year	4.70

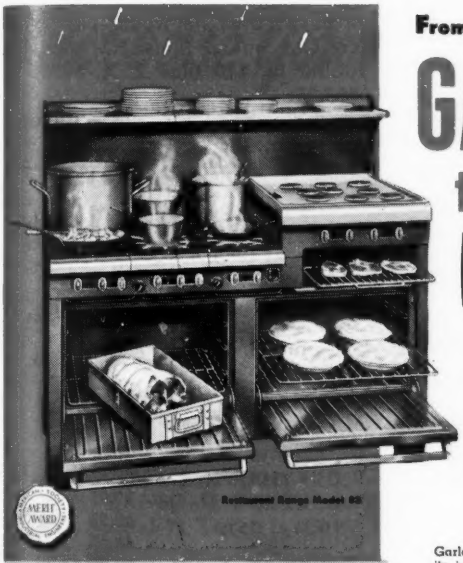
of your sales organization and allow the salesmen to make estimates of quantities which the customer may use without any supervision, or some method to follow, then the flat system of pricing may be used as a method of cutting prices in order to get business away from the other fellow, and you may be involved in a price war as a result of it.

Another method of pricing gas deliveries in cylinders is the so-called "Days-Between-Orders" system and it has considerable merit if it is properly applied. It is based upon the theory that the usual customer demand is a constant factor which reoccurs at regular intervals, and that the days which elapse between the customer's orders for replacement cylinders should be the governing price factor. For purposes of discussion I here submit a typical rate of this type in Table 15.

Bottled gas men who are bothered with the type of customer that always runs out of gas before he calls for a replacement cylinder can appreciate the incentive value of the "Days-Between-Orders" system. Failure to notify the dealer within a very few days of the time that a cylinder is emptied can put the replacement cylinder into a higher replacement price bracket.

The principal trouble with this type of pricing is that unless the dealer devises some method to check the days between orders against the total number of cylinders used by the customer in a year, the seasonal user is apt to gain an unfair advantage over the year-around user who buys the same quantity.

As an example, let us take the year-around user who uses 8 cylinders per year, re-ordering at fairly even intervals of 29 days. He would pay $8 \times \$10.25 = \$82$ for a year's supply of fuel. The summer



From Any Point of View . . .

GARLAND
the Leader
Is Your BEST BUY!

MORE dollar value:

Garland, with its tremendous manufacturing capacity, is able to give you much more for every dollar you invest in cooking equipment.

MORE efficiency features:

Garland is designed to save food, fuel and time! Front-fired burners give greater heat flexibility, help your chef cook more meals. Choice of hot top, open top or griddle top allows you to adapt the range to your specific requirements.

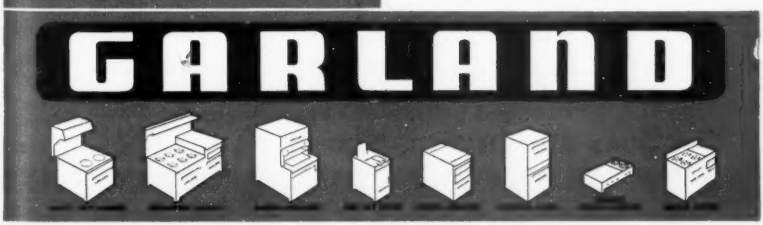
MORE built-in quality:

Garland is quality through and through. Heavy, durable, rigid construction is soundly engineered to serve longer and better! So remember—it pays to push the range most customers choose: Garland, leader in sales.

THE TREND IS TO GAS FOR ALL COMMERCIAL COOKING

All Garland Units are available in Stainless Steel and equipped for use with manufactured, natural or L-P gases.

DETROIT-MICHIGAN STOVE CO.
Detroit 31, Michigan Fine Ranges Since 1864



user who purchases the same quantity of fuel in two months would pay $15 for the first cylinder and the other 7 cylinders would be purchased at fairly even intervals of 9 days; thus he would pay $6.75 for each one of them. His total bill would be $15 plus 7 × $6.75 = $62.25.

Inasmuch as the gas equipment

TABLE 14. COMPARISON OF THE TOTAL AMOUNT THAT A CUSTOMER WOULD PAY IN ONE YEAR UNDER THE FLAT PRICING SYSTEM AS AGAINST THE PROGRESSIVE PRICING SYSTEM. DATA COMPILED FROM TABLES 12 AND 13.

Actual number of cylinders delivered to customer in one year	Total amount that customer would pay in year under flat pricing system	Total amount that customer would pay in year under Progressive Pricing System
1	$15.35	$15.35
2	25.40	25.45
3	32.70	32.65
4	38.00	37.95
5	43.25	43.25
6	48.60	48.55
7	53.90	53.85
8	59.20	59.15
9	64.35	64.45
10	70.60	69.75
11	73.16	75.05
12	79.80	79.75
13	86.45	84.45
14	87.50	89.15
15	93.75	93.85
16	100.00	98.55
17	101.15	103.25
18	107.10	107.95
19	113.05	112.65
20	119.00	117.35
21	119.70	122.05
22	125.40	126.75
23	131.10	131.45
24	136.80	136.15
25	142.50	140.85
26	143.00	145.55
27	148.50	150.25
28	154.00	154.95
29	159.50	159.65
30	165.00	164.35

Increase Your Sales Volume

with

RANSOME

TORCH-FURNACE COMBINATION

SAME FUEL TANK SERVES BOTH TORCH AND FURNACE

MANY USES MEAN MANY PROSPECTS. RANSOME P-32 Furnace with Model 71 Torch is shown here, ready for such operations as sweating large streamline fittings; lead wiping; melting lead joints; core drying; light preheating; laying and shaping asphalt tile. It takes about 3 minutes to convert from torch to furnace operation, and be ready to melt lead, babbitt, asphalt, paraffine, glue, without muss, fuss or a clogged burner.

This combination is a real time and money saver for plumbers, pipefitters, sheetmetal workers, mechanics, ranchers, builders, asphalt tile workers, etc.

SAFETY HELPS YOU SELL. This outfit burns safe, economical LP-Gas, gives extremely stable, clean flame. ICC-approved tank has weighted bottom to minimize tipping, but will not spit or flash flame even when upset.

Step up your industrial appliance business NOW with RANSOME Torch-Furnace combination. Write TODAY for price list, discounts, and catalog of other RANSOME products.

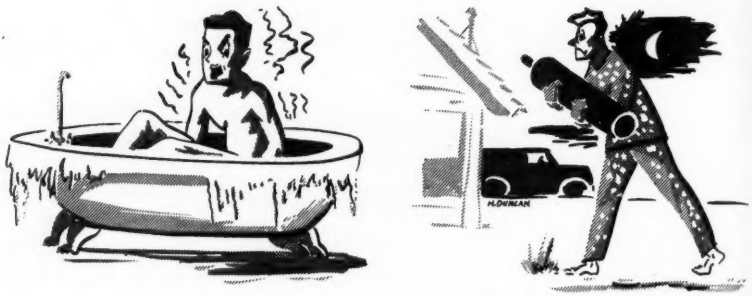
TWO SIZES:
2½ gal. tank; 19" high, weight 34½# full.
5 gal. tank; 26" high, weight 54# full.

RANSOME COMPANY

Designing and Constructing Engineers

17 **ROOM 112 , 4030 HOLLIS ST., EMERYVILLE, CALIF.**

Ransome



There's a type of customer who always runs out of gas before re-ordering.

and quite possibly the gas cylinders are tied up for the same length of time with each customer, it is an obvious unfairness to the dependable, steady user to be discriminated against in this manner.

Those who object to a fluctuating price schedule will also find fault with the "Days-Between-Orders" system, for if the days between orders increases for any reason the customer has to pay a higher price for the cylinder being delivered and this does at times call for explanations. This should not be a serious difficulty, however, for Reddy Kilowatt does the same thing 12 times a year, and this method of pricing is being used with great success by many operators.

Caution: Keep a dated book for entrance of your gas orders so that if any dispute arises as to the date that the customer ordered gas you may be able to show it to him.

There are other operators who sell gas by the pound in much the same way as described in the first part of Chapter 8, excepting that these dealers do not use meters but install fresh full cylinders each time when they deliver gas. They take the partially filled cylinders off from the customer's installation and either weigh them on the spot or take them back to the plant and weigh them, after which they give the customer credit for the gas remaining in the cylinder which was removed.

Therm or Decitherm?

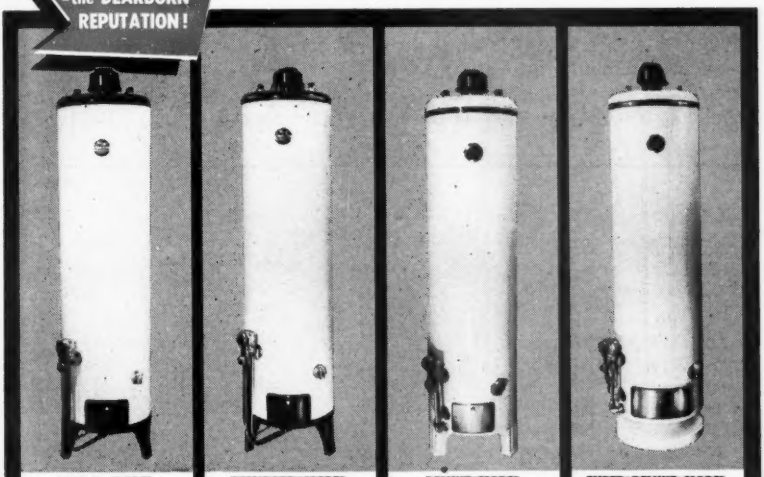
There are some gas dealers who sell gas by the therm or decitherm. Before we have much to say about these units of measurement you should know what they are and why they were evolved. Before modern automatic gas manufacturing machinery was developed, the makers of so-called "manufactured" gas had great difficulty in keeping the Btu content of their gas constant. As a result the therm, a unit of measurement representing 100,000 Btu, was evolved. Daily checks of the heat content of the gas being manufactured were made, and instead of billing the customer in cubic feet

Dearborn's IN HOT WATER
(and loves it!)

Here they are... a brand new line of water heaters carrying the DEARBORN name -the DEARBORN REPUTATION!

NOW..THE MOST FAMOUS NAME IN GAS SPACE HEATERS BRINGS YOU AUTOMATIC GAS WATER HEATERS!

Big name in the gas space heater field, now Dearborn introduces a complete new line of dependable, economical gas water heaters. It's a line you can sell with the same pride and confidence that dealers all over America sell famous Dearborn gas space heaters.



SPECIAL MODEL
- Lifetime Fiberglas insulation
- Grayson Unitrol Jr. thermostat and automatic pilot
- Copper-bearing steel galvanized tank
- Carries a 1 year warranty against tank leakage

STANDARD MODEL
- Lifetime Fiberglas insulation
- Grayson Unitrol Jr. thermostat and automatic pilot
- Durable copper-bearing steel galvanized tank
- Carries a 3 year warranty against tank leakage

DELUXE MODEL
- Lifetime Fiberglas insulation
- Grayson Unitrol Jr. thermostat and automatic pilot
- Heavy duty copper-bearing steel galvanized tank
- Carries a 5 year warranty against tank leakage

SUPER DELUXE MODEL
- Lifetime Fiberglas insulation
- Fully automatic Grayson Unitrol thermostat and safety pilot
- Extra heavy duty copper-bearing steel galvanized tank
- Carries a 10 year warranty against tank leakage

For more sales • more profits • feature the water heater with NAME RECOGNITION ... NAME REPUTATION DEARBORN ... one of the most honored names in American industry

Dearborn STOVE COMPANY
CHICAGO • DALLAS

of gas he was billed in therms or decitherms (1/10th of a therm).

Let us say that a certain customer used 10,000 cubic feet of gas in one month but the average Btu content was but 525 per cubic foot. In that month he would have received 10,000 × 525 = 5,250,000 Btu. Now if in the following month he used 10,000 cubic feet but the average Btu content of the gas had dropped to 510 per cubic foot, then in that month he would have received 10,000 × 510 = 5,100,000 Btu. If he was being billed by the cubic foot he would have paid the same amount for 5,100,000 Btu as he did for 5,250,000 Btu, which was obviously unfair to him; hence the therm was brought into play. The first month he would then pay for 5,250,000/100,000 = 52.5 therms, and the second month he would pay for 5,100,000/100,000 = 51 therms, which is fairer to him.

The use of the therm or the decitherm as a unit of measurement in the liquefied petroleum gas business has always seemed far-fetched to me for the reason that the heat content of the liquefied petroleum gases runs quite constant; furthermore, the therm and decitherm have no specific relationship to the two common measuring standards of weight or volume. Few gas distributors have the facilities to test the Btu content of the gas which they are selling, so these units appear to me to be amusing subterfuges in our business.

Nevertheless, there are operators who use the therm and the decitherm as units of measurement for

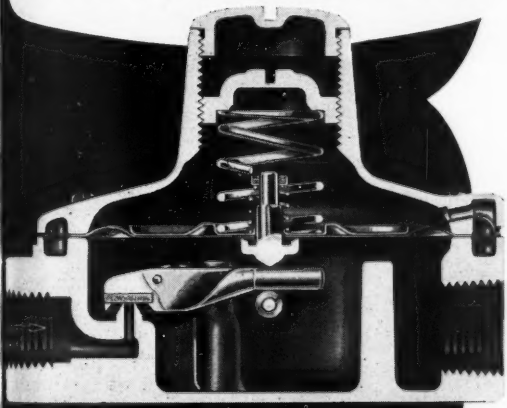
TABLE 15. A TYPICAL "DAYS-BETWEEN-ORDERS" PROPANE GAS PRICE SCHEDULE.

Days between orders	Cylinders per year	Price per cylinder
182 and over	1	$15.00
121 through 181	2	15.00
74 through 120	3 or 4	12.50
61 through 73	5	12.25
53 through 60	6	12.00
46 through 52	7	11.85
29 through 45	8 through 12	10.25
19 through 28	13 through 19	9.75
13 through 18	20 through 29	8.75
10 through 12	30 through 39	7.50
7 through 9	40 through 49	6.75
6 through 8	50 through 59	6.50
4 through 5	60 through 79	6.25
3	80 through 89	5.75
2	100 through 149	5.50
1 or less	150 and over	5.25

For Cash and Carry and Trailer Installations

FISHER® SERIES 912

"LITTLE JOE" REGULATORS 57 CFH MINIMUM CAPACITY

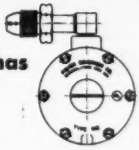


Features

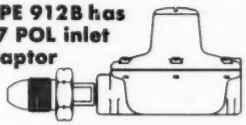
- Sturdy construction
- Strong, sensitive diaphragm
- Large diameter closely calibrated spring
- Sturdy pipe connections-¼" inlet, ⅜" outlet
- 57 CFH minimum capacity

FISHER LEADS THE INDUSTRY IN RESEARCH FOR BETTER GAS PRESSURE CONTROL

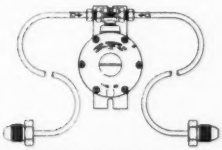
FISHER GOVERNOR COMPANY
Marshalltown, Iowa



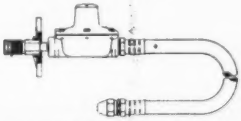
TYPE 912C has angle male POL inlet connection



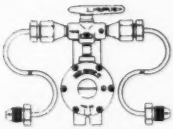
TYPE 912B has V-7 POL inlet adaptor



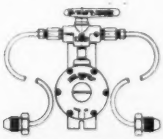
TYPE 912Y-1850A is an economical check valve manifold regulator assembly



TYPE 912GH fitted for cash and carry installations



TYPE 912Y-1885 has manual throwover manifold with POL X POL ¼" pigtails



TYPE 912Y-1882 has manual throwover manifold and inverted flare X POL ¼" pigtails

AVAILABLE IN TYPES SHOWN AND OTHER SPECIALIZED INLET AND OUTLET FITTINGS

reasons of merit known to themselves; hence, any treatise on rate compilations would not be complete without reference to them.

Returning to the typical electric rate given in Chapter 7, a competitive decitherm rate would be compiled somewhat as follows:

COOKING.

15 KWH = 6.83 decitherms. Call it 7 decitherms. 7 decitherms can cost 75c or 10.98c ea. Call it 11c each.

85 KWH = 38.72 decitherms. Call it 39 decitherms. 39 decitherms can cost $1.70 or 4.39c ea. Call it 4.4c each.

WATER HEATING.

45 KWH = 20.85 decitherms. Call it 21 decitherms. 21 decitherms can cost 90c or 4.28c ea. Call it 4.3c each.

295 KWH = 136.7 decitherms. Call it 137 decitherms. 137 decitherms can cost $2.95 or 2.15c ea. Call it 2.2c each.

This would stack up with the competitive electric rate as follows:

COOKING.

15 KWH @ 5c =	$0.75	
85 KWH @ 2c =	$1.70	
100 Totals	$2.45	
7 decitherms @ 11c =		$0.77
39 decitherms @ 4.4c =		$1.72
46 Totals		$2.49

WATER HEATING.

45 KWH @ 2c =	$0.90	
295 KWH @ 1c =	$2.95	
340 Totals	$3.85	
21 decitherms @ 4.3c =		$0.90
137 decitherms @ 2.2c =		$3.02
158 Totals		$3.92

For the two services the difference is but 11c per month which is too little to talk about unless Reddy Kilowatt wishes to go into involved explanations of the cost to consumers of low voltages and creeping meters!

A competitive decitherm rate to the typical electric rate which has been considered would then stand as follows:

First 7 decitherms in a month, 11c each.

Next 39 decitherms in a month, 4.4c each.

Next 21 decitherms in a month, 4.3c each.

All over 67 decitherms in a month, 2.2c each.

A therm rate is not quite as applicable to the typical competitive rate selected, but as the therm is 10 times a decitherm it would be as follows:

First 7/10 of a therm in a month at $1.10 per therm.

Next 3-9/10ths therms in a month at $0.44 per therm.

Next 2-1/10th therms in a month at $0.43 per therm.

All over 6-7/10ths therms in a month at $0.22 per therm.

The measurement of therms and decitherms is, of course, by meters calibrated in one of these two units of measurement, converting either factors of volume or rate of flow into theoretical heat units.

Another very popular unit of measurement is the cubic foot, and again applying it to the typical electric rate which has been selected we come up with the following rate equivalents.

COOKING.

15 KWH = 28.37 cu. ft. propane. Call it 28 cu. ft. 28 cu. ft. can cost

$0.75 or $0.0267 ea. Call it $0.027.

85 KWH = 160.8 cu. ft. propane. Call it 161 cu. ft. 161 cu. ft. can cost $1.70 or $0.0105 ea.

WATER HEATING.

45 KWH = 86.57 cu. ft. propane. Call it 87 cu. ft. 87 cu. ft. can cost $0.90 or $0.0103 ea.

295 KWH = 567.52 cu. ft. propane. Call it 568 cu. ft. 568 cu. ft. can cost $2.95 or $0.00518 ea. Call it $0.0052 ea.

Compared With Electric

This compares with the typical electric rate selected as follows:

COOKING.

15 KWH @ 5c	=	$0.75
85 KWH @ 2c	=	$1.70
100 Totals		$2.45
28 cu. ft. @ $0.027	=	$0.756
161 cu. ft. @ $0.0105	=	$1.6905
189 Totals		$2.4465

WATER HEATING.

45 KWH @ 2c	=	$0.90
295 KWH @ 1c	=	$2.95
340 Totals		$3.85
87 cu. ft. @ $0.0103	=	$0.8961
568 cu. ft. @ $0.0052	=	$2.9536
655 Totals		$3.8497

To all intents and purposes the two rates are identical, but as gas companies are prone to publish rates in terms of hundreds or thousands of cubic feet, the rate schedule would probably be published as follows:

First 28 cubic feet in a month at a rate of $2.70 per hundred.

Next 161 cubic feet in a month at a rate of $1.05 per hundred.

Next 87 cubic feet in a month at a rate of $1.03 per hundred.

All over 276 cubic feet in a

month at a rate of $0.52 per hundred.

There are numerous other units of measurement, most of which are merely trade names applied to some standard unit of measurement such as the pound, gallon, cubic foot, therm or decitherm. One distributor may measure gas in "Thrift"* units, each one of which may be any one of the standard units mentioned or a portion thereof. Some other distributor may advertise as selling by "Old Honesty Standards,"* meaning the same thing. My personal opinion is that it is better to stick to recognized units of measurement, but then again a large distributor may gain local recognition of some special unit devised by himself which is of great advertising value to him. Local regulatory bodies are leaning toward the pound as a unit of measurement and in some states conversion upon the customer's bill from any unit of measurement to pounds is mandatory.

Tank Truck Delivery Differs

Within our industry there are many large operators who go after this liquefied petroleum gas business in a big way and sell their product from big tank trucks by the gallon. Compilation of their price lists is an entirely different matter which will be taken up in the following chapter.

•

*I have no knowledge of any gas distributors using these particular names for the units by which they are selling. If such there are, my reference to them herein is purely a coincidence.

Suburban Propane Gas Corp. Acquires Rulane Gas Co.

The Suburban Propane Gas Corp., Whippany, N. J., has announced plans to acquire the Rulane Gas Co. which serves 70,000 customers in the south.

W. S. Lander, of Charlotte, N. C., president of Rulane, and Mark Anton, Suburban president, said four of Suburban's subsidiary corporations have agreed to buy up more than two-thirds of Rulane's outstanding common stock from controlling stockholders.

The acquisition will be Suburban's largest since 1945, when it purchased the Eastern liquefied petroleum gas properties of Phillips Petroleum Co. Rulane's customers are in the Carolinas, Virginia and Tennessee, where 10 bulk plants are located. Ten additional bulk plants are leased to independent operators.

Suburban customers, with the Rulane acquisition, will total more than 250,000.

"We have long been considering extending our service further south," Anton said, "and the acquisition of Rulane, the largest propane operation in this area, accomplishes this objective.

"Practically all the new properties are ideally located in agricultural areas which represent excellent potential for anhydrous ammonia, the gas fertilizer — Suburban's newest product," he added.

Shell Oil Co. Testing Salt Bed Storage

Possibilities of underground storage of surplus summer output of propane in the Elk City, Okla., area are being studied by Shell Oil Co. Testing of shallow salt beds is now under way.

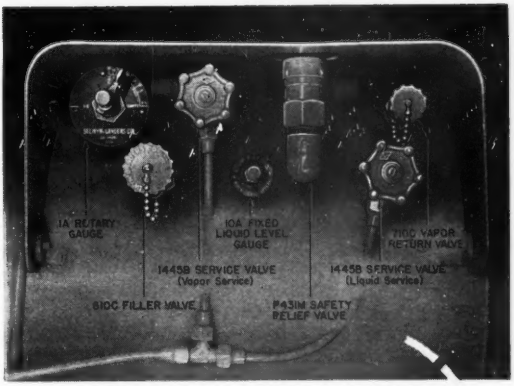
Propane is already being stored in underground salt reservoirs in Winkler, Scurry, Reagan and Upton counties.

MINNEAPOLIS-MOLINE
MODERN MACHINERY
AVERY

LP-GAS TRACTORS USE

S-L

FUEL TANK FITTINGS



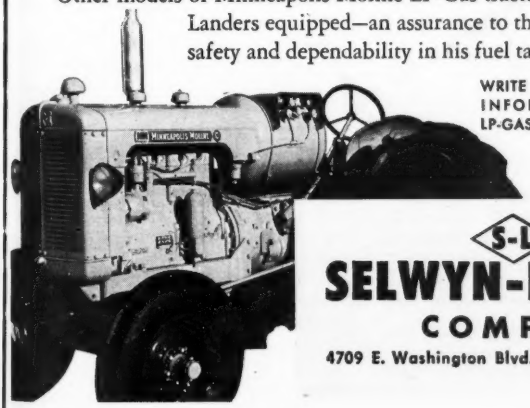
SELWYN-LANDERS LP-GAS VALVES & GAUGES SIDE MOUNTED. All fittings listed with Underwriter's Laboratories.

EVERY FITTING A PRODUCT OF SELWYN-LANDERS

Here you see the latest Minneapolis-Moline Model "G" LP-Gas Tractor equipped with the latest and best in LP-Gas equipment—fittings for quickly and safely transferring LP-Gas to and from the tractor tank.

Here too you see the Pioneer builder of LP-Gas tractors using valves and gauges designed and built by the pioneers in the field of LPG engine fuel tank fittings.

Other models of Minneapolis-Moline LP-Gas tractors also are Selwyn-Landers equipped—an assurance to the tractor owner of safety and dependability in his fuel tank fittings.



WRITE OR WIRE FOR COMPLETE INFORMATION ON TRACTOR LP-GAS TANK FITTINGS.

S-L

SELWYN-LANDERS COMPANY

4709 E. Washington Blvd., Los Angeles 22, Calif.

PAD'S View of Industry's Problems And the Washington Setup

By JOHN W. OYLER

Assistant to Director, Natural Gas Production and Processing Division, Petroleum Administration for Defense, Washington, D. C.

I WAS asked to talk* about the Petroleum Administration and the way the liquefied petroleum gas industry fits into the Washington picture. So I'll try to sketch for you the various administrations and agencies as they're set up.

Directly under the President and immediately responsible to him is the Office of Defense Mobilization, whose administrator is Charles E. Wilson. Directly responsible to him are two administrations—the Economic Stabilization Administration and the Defense Production Administration. The Economic Stabilization Administration has the job of controlling prices and wages. The Defense Production Administration has the job of watching over the production of materials, both end products and the materials that go into end products.

The Defense Production Administration—or one of its branches—is the agency with which most of you become entangled when you come to Washington.

This is the administration that gets all the figures on available materials and production, takes all the requirement figures from the various claimant agencies, then doles out the materials in an effort to keep production in balance. There is just so much copper, iron, steel, and aluminum available at any given time. The Defense Production Administration determines how much of the available supply each claimant agency will receive.

This brings us to the claimant agencies. A claimant agency is any branch of government that claims any of the controlled materials for its programs in the national defense effort.

Probably the largest of the claimant agencies is the National Production Authority. NPA has authority over the manufacture of all finished products, all manufactured items. Inside NPA you can find a division for practically anything that is produced today.

But the Petroleum Administration for Defense is a claimant agency too. So is the Defense Transportation Administration, and so is the Defense Department, and so are all the departments of government that need materials to complete a program.

Petroleum Administration for Defense discharges its defense-mobilization obligations through three main branches:

1. The Gas Branch, and that includes control over transmission and distribution of all gas.
2. The Foreign Petroleum Branch.
3. The Domestic Petroleum Branch.

You are interested, I know, only in

*Delivered before the North Eastern District, LPGA, meeting in New York City, Oct. 11.

the Domestic Petroleum Branch, since it covers all of your normal activities.

In this branch are four operating divisions:

1. Production Division.
2. Supply and Transportation Division.
3. Refining Division.
4. Natural Gas Production and Processing Division.

Responsibility for the supply and distribution of LP-Gas is vested in the Natural Gas Production and Processing Division, of which Richard P. Walsh is Director.

There were two reasons for putting LPG in this division. One was the fact that during World War II this division, under what was then known as the Petroleum Administration for War, had this sort of administrative setup. The second was the fact that 70% of the product you distribute is produced at natural gasoline plants.

LPG—Growing Fastest

The LP-Gas industry is viewed by PAD as the fastest growing part of the petroleum industry. In fact, next to television, it is probably the fastest growing industry in the country today. The LPG industry now serves approximately 7,500,000 homes in the United States. Put those homes side by side on 25-foot lots, and they would stretch 35,000 miles—one and one-half times around the world. Yet the home use of LPG is only 58% of the total use of the gas.

The rapid growth of the industry has naturally resulted in problems, and these are confronting you now. Those that must be given immediate attention are three—supply, transportation and storage.

PAD's Natural Gas Production and Processing Division has been accumulating as much pertinent data as is available on the supply of your product. It has been determined that about 40% of the available propane is being recovered at the natural gasoline plants. But the recently expanded plants and the new plants being built are putting in more refrigeration for the specific purpose of recovering more propane. Some plants plan to recover up to 80% of this product.

Production Expanded

There have been a number of projects for expansion approved by PAD within the past six months. These will produce 86,000 barrels a day of all liquid products. This expansion is equal to the total production of California, and California ranks third among the states in production.

This supply picture seems an optimistic one until you consider some other factors.

The aviation-gasoline program, for instance, is demanding more and more iso-butane. So the butanes normally used in the domestic fuel market are now being split to recover the iso-butanes. The normal butane is then blended with motor gasoline, and there is a consequent increased demand for propane. It gets worse as you go along. The Sun Oil Co. recently installed a polymerization plant that separates propylene from propane. This process will reduce the propane that formerly went to the fuel market from the company by 30%. The propylenes are used in the manufacture of motor gasoline—but of course their diversion to that use cuts down the total amount of LPG available.

Last winter there was almost a total collapse of the LPG industry in some sections of the country. This near collapse, it has been determined, was chiefly the result of the lack of transportation. There were not

enough pressure tank cars to begin with, and then the railroad strike interrupted the flow of propane to all sections of the country. Yet last year's experience was only a beginning. Sometime in April a committee from the industry told the National Production Authority that an additional 2500 pressure tank cars would be necessary to handle the demand during the winter of 1951.

During the first six months of this year 750 new pressure tank cars were built. Since the production of these tank cars has been stepped up a conservative estimate of production for the last half of the year would be 1850 cars.

There is additional help in sight. Phillips Petroleum Co. is now looping its products line from Borger, Texas, to Chicago, Ill. The company plans to transport between 10,000 and 20,000 barrels a day through that line. Strike an average, and assume that the line will carry 15,000 barrels a day. Then during peak periods this line will replace approximately 1000 pressure cars. This new transport, alone, will do much to help alleviate the serious problem the LP-Gas industry has faced as far as transportation is concerned.

Economics Limiting Factor

Storage is the other most important problem to consider. And here the economics of storage is a limiting factor. Experts estimate it costs from $17 to $18 a barrel to store LP-Gas in steel tanks, while it costs only about $1 a barrel to store fuel oil. The result has been that LPG distributors have kept storage at a minimum.

Some relief has come through underground storage of LPG, which was developed by Frank Matheny, of the Hydro-Carbon Storage Corp.* The first method offered was one of drilling into a salt dome, then washing out the cavity with water to provide a reservoir. At present, two or three more processes are being tried, all of them simple mining operations. The cost of an underground storage project ranges anywhere from 80 cents to $3.25 a barrel, and the methods involve the use of little steel.

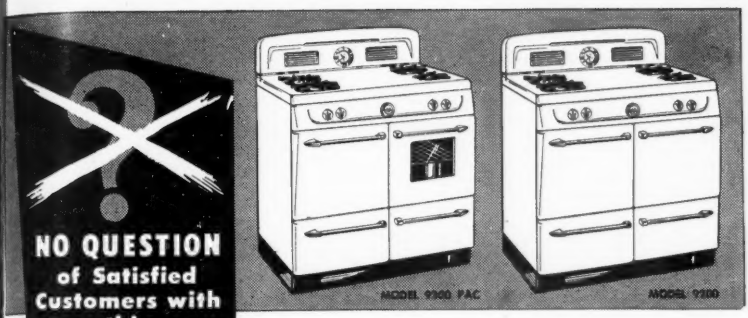
Storage Projects Approved

Within the past six months the Natural Gas Production and Processing Division of PAD has approved several LPG underground-storage projects. Taken together, these projects will store more than a million barrels of propane and butane. All of these storage projects, though, with the exception of one, are in producing areas. As the development of underground storage increases, we feel, it will be the answer to one of the major problems of the industry.

The problems involved here are numerous and complicated. I want to remind you that you are represented in Washington. You have spokesmen there, people who know the industry and the situations the industry confronts. Alton Lutz, formerly of the Protane Corp. is assistant to the director of the natural gas production and processing, will welcome you if you are in the Capital. Any problems you have will, I can assure you, be given our immediate attention, and you can count on our complete cooperation in solving them.

---

*See Butane-Propane News, August, 1951, Page 61.



NO QUESTION
of Satisfied Customers with this Complete Line

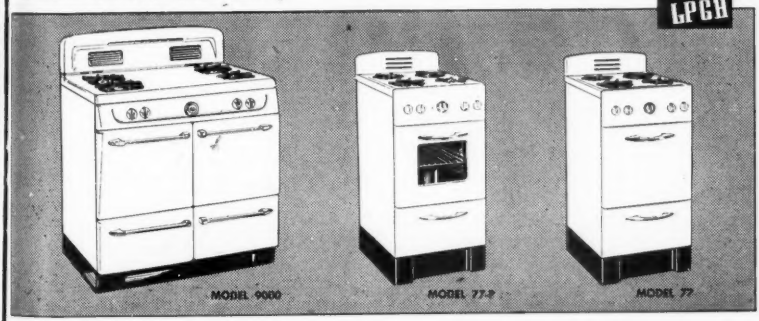
Modern Maid
GAS RANGES

With Deluxe features brought to the popular price field, prospects sell themselves on the beautiful new **Modern Maid** line of domestic cooking ranges. **Modern Maids** are the answer to your dreams of a fast-moving, high-prestige product . . . they answer your customer's dreams of a long-service, up-to-the-minute cooking appliance.

Designed especially for use with LP-Gas, the **Modern Maids** combine rugged, long-life construction with sleek modern design. Each oven is porcelained inside and out, insulated heavily with Fiberglas. Each burner has an individual drip pan, and manifold covers are recessed for cooler gas cock handles.

There is a Representative or Factory Warehouse in Your Vicinity
WRITE US FOR DETAILS

TENNESSEE STOVE WORKS
Three Generations of Stove Building
CHATTANOOGA 1, TENN.



One side of the 2500-sq. ft. display at the Indiana state fair this fall. The booth was sponsored by the Indiana LP-Gas Assn.

Florida Firm to Test City Tax on LPG Sales

A move to test the 10% utilities tax levied against bottled gas sales by the city of St. Petersburg, Fla., has been made by Foster Gas Service of that city.

R. J. and Kermit Foster, heads of the firm, contend that the tax is discriminatory and unfair and that neither the company nor the service it renders places it in a public utility classification. The Fosters claim that the tax has long been a source of complaint from customers.

There are eight LPG dealers in St. Petersburg and it is estimated that some 10,000 families use the fuel.

State Fair Booth Pulls Crowd For Indiana Dealers

One of the biggest LP-Gas promotional events in Indiana centered about the Indiana LP-Gas Assn. exhibit at the 1951 state fair Aug. 30-Sept. 7 in Indianapolis.

Covering 2500 square feet of floor space, the exhibit featured a wide variety of displays promoting the various uses of LP-Gas.

During the show many thousand people visited the booth and 122 genuine prospects (some for as many as 4 appliances) were secured—many of them for tractor conversions.

No record was made of actual appliances sold, but the number was substantial. Highlighting the 9 day show was the awarding of a water heater, space heater, and stock tank heater as door prizes.

A. B. McCraw, LPG Dealer, Died in October

Albert B. McCraw, long-time gas dealer of Gaffney, S. C., died at the age of 70 on Oct. 4.

Mr. McCraw was a lifelong resident of Cherokee county in South Carolina.

Mix-O-Gas fluorescent roadsigns work day and night selling for dealers.

Delta Mix-O-Gas Merchandising Program Helps Dealers in Record Sales Year!

In achieving the Mix-O-Gas sales records of 1951, the teamwork of progressive dealers backed by Delta's hard-hitting merchandising program has done the job. The advantages of the superior, patented Mix-O-Gas Systems have been backed by a consistent program of magazine advertising, newspaper advertising, radio advertising, dealer sales aids, direct mail, etc. A continuous publicity campaign has produced results in such outlets as Farm & Ranch, House Beautiful, Tourist Court Journal, Progressive Farmer, Digest of Farm News, Science Service, and others.

The teamwork will continue in 1952 on Delta's Mix-O-Gas Systems.

DELTA TANK MANUFACTURING CO. INC.

P. O. BOX 1469, BATON ROUGE, LA. • P. O. BOX 1091, MACON, GA.
Export Office; Suite 110, International Trade Mart, New Orleans, U. S. A.
MANUFACTURERS OF LPG PRESSURE TANKS AND I. C. C. CYLINDERS

Make Safety Your Full-Time Job

By GEORGE R. KELLEY
Vice President, Utilities Distributors, Inc.,
Portland, Maine

THIS meeting* is mainly devoted to sales talks and sales techniques, from which can be learned many pointers to assist the LP-Gas operators. However, there is one phase of the business that can also affect the sale of gas appliances, one which, in many cases, is very much neglected. Poor safety records increase sales resistance and sometimes make sales impossible. Safety means, "the keeping of oneself and others safe, especially from accident." I wonder how many in this industry stop to analyze their responsibility to the thousands of customers who are now users of LP-Gas, and depend on the workers in this industry for safe operation of the appliances they use.

GEO. R. KELLEY

A safe operation is one of the keys to success in this industry, from the producers, down to the ultimate user. All of us, no matter what our job, should be ever alert to impress on others the importance of safety in all phases of gas use.

Many companies have excellent safety programs, and I believe more and more are becoming aware of the importance of training programs, not only for their own personnel, but to promote such programs for companies not as safety conscious.

However, no program will meet with success unless there is a sincere effort on the part of all concerned who recognize that it is necessary, and requires conscientious effort to see it is carried out. The common impression held by many is that such a program is fine for the other fellow, but we certainly don't need it.

They are the individuals who learn only the hard way, after the accident happens, but, unfortunately, we all feel the effects from even a small accident which retards consumer acceptance, and provides our competition with more ammunition to use against us.

It is surprising to find some companies are thoroughly aware of proper practices, but disregard them in actual operation. Surely the servicemen are not to blame for indifference and carelessness if their superiors allow any phase of their operation to function without principles of safety being observed.

Would you consider a company was safety conscious if it located a storage plant today that did not conform to the regulations outlined in Pamphlet 58? It has been done, but do you think this company personnel in their work will forget this example, and reform of their own accord? I doubt it.

It is understandable that as the number of consumers increase, so will the number of accidents, but it is our job to keep this number at a mini-

*Paper delivered before the North East Section, LPGA, in New York City, Oct. 11. Abstracted by BUTANE-PROPANE *News*.

Eliminate Leaks ON ALL YOUR LP-GAS LINES with Nordstroms

Automatically Lubricated

Leaking valves are a thing of the past when Nordstroms are installed. "Sealdport" lubrication seals these valves against leaks—and now by the use of Hypermatic lubricant (made in special consistency for LP-Gas) each valve is automatically lubricated, so that leaks don't get started. Ask for Bulletin.

Nordstrom LUBRICATED VALVES

KEEP UPKEEP DOWN

ROCKWELL MANUFACTURING COMPANY

400 North Lexington Avenue, Pittsburgh 8, Pennsylvania • *Offices in principal cities*

mum. Some accidents are caused by lack of experience, and the experience gained can help us prevent others.

There are mainly two types of servicemen making gas installations. Unfortunately, one is the individual who has no conception of gas and how it should be handled, or how equipment should be installed. While we realize these are in the minority, they constitute a very definite hazard to themselves, the customer, and the gas business.

Safety needs to be sold not only to personnel, but many times to the prospective user and this can be illustrated by the many times that consumers insist on locating gas cylinders in the basement, or some other improper location. It requires sales effort to convince the customer that the location is improper and yet, at the same time, not instill fear of the product that would be detrimental.

Legislation Increasing

We certainly are approaching a time when we are not the only ones that are watching for LP-Gas accidents; look at the state regulating bodies. Special rules now apply in different states, with the promise of more and more to come.

We believe most state officials are sincere in their attempt to protect the public but they can do tremendous harm if we give them reason to put into effect rules and regulations to govern the few offenders, but which penalizes us all.

We believe that by constant emphasis, we can have greater cooperation from state officials, and hope that, eventually, they will all share the opinion of the director of the insurance commissioner's office in the state of Maine wherein he states he feels "that the LP-Gas industry has had a high sense of moral obligation in policing installations."

We spend thousands of dollars for advertising, but the installation man can discredit it in a matter of minutes. How are we going to impress the serviceman with the importance of doing the job right? I believe the following points will do a great deal to accomplish this:

1. Have a sincere safety program.
2. Do not depend on luck that it is followed.
3. Advise your personnel of the cause and effect of accidents.
4. Practice what you preach, and consider safety on any proposed installation.

Protane Corp. Buys Shell Outlets in Two Areas

Announcement has been made of the acquisition of Shell liquefied petroleum gas dealers by The Protane Corp., of Erie, Pa., in the areas of northern Michigan and eastern Ohio.

In a joint statement the Shell Oil Co. and H. N. Forman, president of The Protane Corp., emphasized that the desire to give existing customers better service was the primary reason for the transaction.

The Shell Oil Co. will use the equipment which is freed by withdrawal from northern Michigan and eastern Ohio to more heavily concentrate their business near their present bulk plant locations.

Warren Petroleum Will Rebuild Newark, N.J., Bulk Plant

The liquefied petroleum gas terminal at Newark, N.J., of Warren Petroleum Corp. which was destroyed by fire last July, will be rebuilt. Construction will start immediately and the total cost is estimated to be $1,500,000.

Both state and city permits have been approved for this rebuilding.

Our Contract Customers have this assurance of continuous Propane supply:

IT IS SHELL'S LONG-ESTABLISHED POLICY TO SELL PROPANE ONLY WITHIN THE COMPANY'S CAPACITY TO PRODUCE AND DELIVER.

MEMBER
national LP-Gas information program

SHELL OIL COMPANY

Atlanta • Baltimore • Chicago • Cleveland • Detroit • Indianapolis • Los Angeles
Minneapolis • New York • Portland, Oregon • Sacramento • St. Louis • San Francisco • Seattle

SHELL

Minnesota Firm Buys Badger Gas Products

The Dahl Co., of Minneapolis, has purchased Badger Gas Products of Platteville, Wis.

Harris J. Helmer has been heading the company, one of the leading LPG dealers in southwestern Wisconsin and northern Illinois, since the death of his father, George H. Helmer, founder.

Engineering Now Underway For Chile's First Refinery

Engineering has been initiated on Chile's first refinery, according to an announcement made by the M. W. Kellogg Co., refinery and chemical engineer-contractors of New York City. It will be located at a site about 10 miles north of Valparaiso.

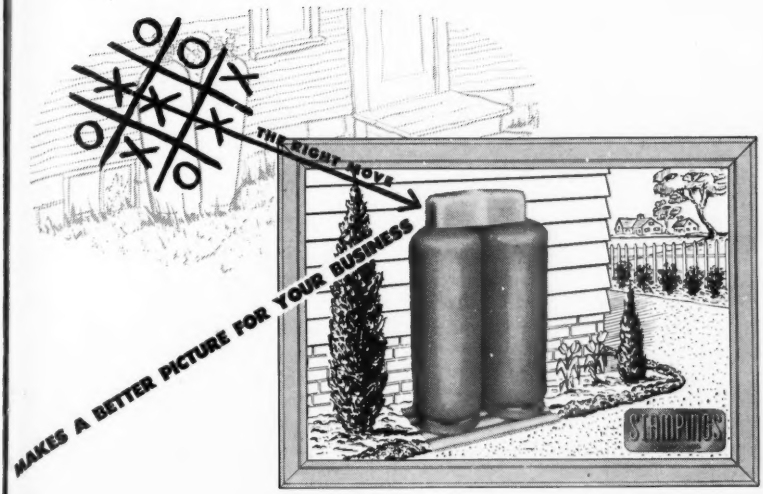
Among the products to be recovered is liquefied petroleum gas.

Bottled Gas Firm Opens Branch in Tampa

The Southwestern Natural Gas Corp. has opened a new bottled gas display room in Tampa, Fla., at 3910 E. Hillsborough Ave., featuring a complete line of gas appliances. George M. Groome is Tampa branch manager.

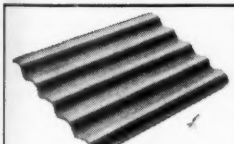
Southeastern Natural built its first bulk plant in Tampa in 1927 and now has 10 such plants in operation throughout south Florida.

Bulk tank delivery trucks of the Illinois Butane Gas and Equipment Co., Bloomington, Ill., do extra duty as traveling billboards. Painted in four colors, the emblem of the National LP-Gas Promotional Program shows up attractively on the white tank background. People call up and ask, "Do you sell that LP-Gas," reports Al Woelfle, president of the company. "When they see the emblem on the trucks, they identify our company with the national LP-Gas advertising," he said. Driver George Scott is shown stepping into the cab of one of the four trucks in the company fleet.



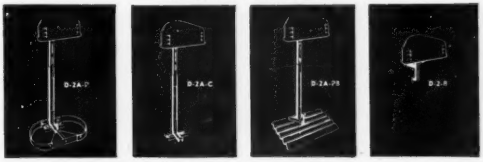
PLEASING APPEARANCE helps greatly to sell LP-Gas Service. That's why we have spent time, effort and money to make Stampings Housings the kind of units that you can install with pride and satisfaction.

You can profit now by supplying your trade with the type of housing that looks good on the job — and provides maximum safety. Select from this complete line the Stampings model that best meets your requirements. Profit with good design to increase your business and satisfy particular customers.



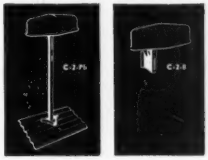
Made of asbestos and concrete, these bases stand up under weather and abuse. Corrugated surface provides drainage and ventilation. Size is 21" wide by 30" long. You drill holes as required.

THE D SERIES IN 4 MODELS



MODEL D-2A-P. A complete unit for 2 cylinders. Comes with hood, post and base forgr.
MODEL D-2A-C. A complete unit for 2 cylinders. Comes with hood, post, but no base form.
MODEL D-2A-PB. A complete unit for 2 cylinders. Comes with hood, post and prefabricated base.
MODEL D-2-B. Wall bracket type for 2 cylinders. Comes with hood, bracket and screws.

THE C SERIES IN 2 MODELS



MODEL C-2-PB. A 2-cylinder unit with hood, post and prefabricated base.
MODEL C-2-B. A 2-cylinder unit with hood mounted on bracket.

FOR SINGLE CYLINDER

MODEL SH-1. A single cylinder unit for wall mounting. Brass pin hinge and necessary screws.

RIMCO CAST ALUMINUM

MODEL RIMCO E-1-TB. A cast aluminum housing for 2 cylinders. Comes complete with hood, post and prefabricated base.

Write today for new Stampings Catalog

STAMPINGS INC., DAVENPORT, IOWA. Phone 3-2781 • EASTERN SALES OFFICE, 522-5th Ave., NEW YORK, Murray Hill 7-5523

LPGA's State Integration Plan Helps Solve National Problems

FOR more than 18 months the Liquefied Petroleum Gas Assn. has been presenting to state associations an integration plan which is intended to result in many advantages to the state associations and their memberships, and to the national organization, as well.

R. H. MAHNKE

The plan provides for an official affiliation of state groups with the LPGA on a basis whereby a portion of membership dues is retained within the states for the operation of their own associations, the remainder going to the national group for overall expenses in connection with the problems of concern to all the states represented and to cover the expense of district offices. In no instance does it change the setup of any state association but instead gives each association the backing of the national organization. The members automatically are entered upon the rolls of the LPGA.

As rapidly as possible, permanently appointed district secretaries are established in headquarters central to the groups of states, where their services are available for such help as may be needed by state groups and their members. At least once a year, these district secretaries conduct district meetings where, frequently, trade shows are presented also.

The present five district offices are as follows:

San Francisco—1355 Market St. Ben Marsh, secretary.

Denver—Flat Iron Bldg. J. C. Crawford, secretary.

Wichita—210 Kaufman Bldg. R. C. Tanner, secretary.

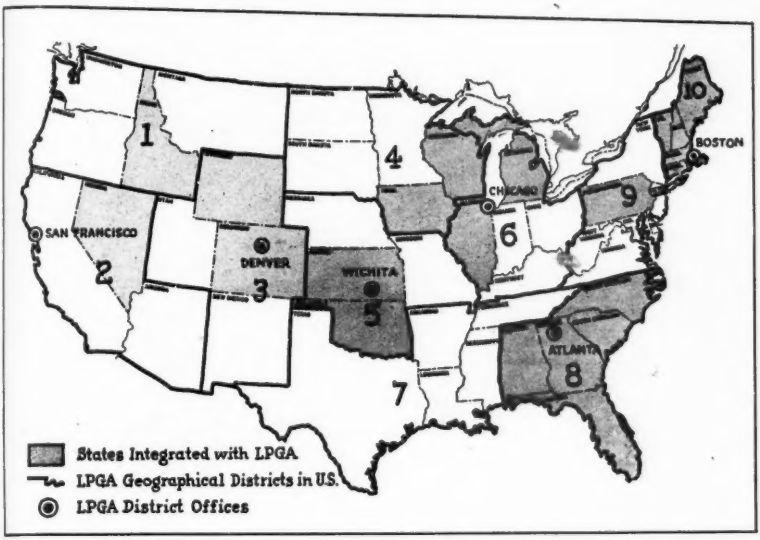
Boston—419 Boylston St. L. E. Davis, secretary.

Atlanta—800 Peachtree Bldg. Tom Fields, secretary.

Another office has been approved recently by LPGA directors to serve the states of Illinois, Iowa, Michigan, and Wisconsin. Its headquarters will be in Chicago.

As a means of giving greater membership support to the national LPGA, the state integration plan has aided materially is presenting a solid industry front to authorities in Washington in efforts so far made to get greater consideration in the allotment of scarce materials needed by the LP-Gas industry. Many additional group interests are also being served similarly. Through the integration plan, duplication of effort and outlay of money are saved, enabling the national LPGA to oppose unfavorable legislation within states and render other valuable services.

At present, 22 states have integrated with the LPGA. They are Alabama, Colorado, Connecticut, Florida, Georgia, Idaho, Illinois, Iowa, Kansas, Maine, Massachusetts, Mich-



Map shows states whose LP-Gas associations have affiliated with LPGA, the 10 geographical subdivisions termed districts, and the names of towns in which are located the district secretaries of the LPGA.

igan, Nevada, New Hampshire, North Carolina, Oklahoma, Pennsylvania, Rhode Island, South Carolina, Vermont, Wisconsin, and Wyoming.

All state associations are invited to come into the plan. The promotion of the idea has been under the direction of R. H. Mahnke, manager, district organizations, who has been highly successful in presenting the plan to state groups throughout the country. Mr. Mahnke was formerly executive secretary of the Kansas LP-Gas Assn. where his success was so outstanding as an organizer that he was drafted by the LPGA for this special work.

When all state associations have entered into this plan, it will bring about a union of forces which will be well positioned to advance the best interests of the industry.

LPG Dealer to Serve Many Oregon Communities

W. J. Swick of the Northwest Liquified Gas Co., The Dalles, Ore., has purchased the John Day (Ore.) branch operation from the Baker Liquid Gas Co. and will combine the new facilities with his branch already located in John Day.

The company will be operated under the name John Day Nor-Gas and will serve Prairie City, Bates, Seneca, Mt. Vernon, Dayville, Mitchell, Long Creek, and Fox Valley, all in Oregon.

Associations

California

LPG dealers from the desert area of California met in Victorville Nov. 2 to hear George W. Requa, executive secretary of the Liquid Gas Dealers Assn. of California, speak on "Security and How to Achieve It" and to see color slides from the state fire marshal's office pertaining to LP-Gas fires.

W. K. Merrill, of Bu-Pane Gas Service in Victorville and a director from District 14 of the association, chairmanned the meeting.

Colorado

Reduction in renewal rates for Colorado dealers participating in the Colorado LP-Gas Assn.'s insurance plan have been announced by W. A. Baum, president of the group.

The reductions are in order as a result of the very low loss ratio during the first year of the plan.

Many Colorado dealers have taken advantage of the blanket plan but, according to Mr. Baum, many more dealers in the state are not now insured under the plan, which consists of full-coverage liability insurance at considerably reduced rates.

Illinois

New officers for the Illinois LP-Gas Assn. were elected Oct. 25 at a meeting in Springfield. F. L. Malan, Central Bottled Gas Co., Salem, is the new president.

John Norris, Cylindro Gas Co., Quincy, was elected vice president and G. W. Chapman, Chapman Gas Co., Chester, is secretary-treasurer.

Kansas

The annual fall business meeting of the Kansas LP-Gas Assn. was held at the Broadview hotel, Wichita, Oct. 29, with President A. C. Ferrell in the chair, and R. C. Tanner, secretary, in

V. J. Wortham (left), Prairie Gas & Equipment Co., Liberal, Kan., who accepted safety award for their driver, John Foster, as safest LPG truck operator in Kansas LP-Gas Assn., and Elmer Russell of the same company.

Kansas LP-Gas Assn. board of directors (left to right): Frank Groves, Arkansas City; A. C. Ferrell (retiring president), Atchison; William B. Hettic, Liberal; Rex Wheeler (newly elected president), LaCrosse; Glenn McGuire, Iola; Lee Laptad, Olathe; Francis R. Jensen, Atwood; Harold Stanton, Morrowville. Not pictured is George Grimes, Ashland.

charge of arrangements. This meeting, attended by 125 dealers throughout the state, featured LP-Gas industry speakers such as:

Elmer W. Cone, Elmer W. Cone Co., Kansas City, who spoke on the subject "Approach to Sales." Mr. Cone emphasized the need for creative selling in a period of general sales approach laziness.

T. Fred True, State Sealer, Topeka, Kan., outlined the activities of the Kansas Weights and Measures department in the enforcing and proving of the LP-Gas weights and measures law.

The luncheon speaker featured the nationally known banker-humorist, Van Murchie, St. Joseph, Mo.

John Guardiola, advertising manager, Weatherhead Co., Cleveland, spoke on the subject "How to Get the Most Out of Your Advertising Dollar." Mr. Guardiola's talk was highlighted by the graphic illustrations of advertising media available to the LP-Gas industry.

Election of members to the board of directors followed. Those elected were: Harold Stanton, Morrowville, District 3; George Grimes, Ashland, District 6; and Lee Laptad, Olathe, director-at-large.

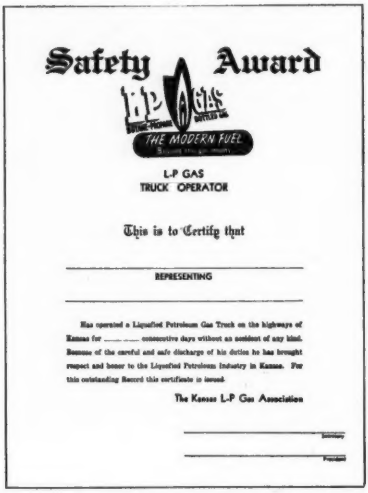
The Kansas LP-Gas Assn. board of directors elected officers at a separate session. Those elected were:

President: Rex Wheeler, Humburg Co., LaCrosse.

Vice President: Lee Laptad, Johnson County LP-Gas, Olathe.

Secretary-Treasurer: William Hettic, Hettic Gas & Appliance, Inc., Liberal.

A feature of the day's activities was the warding of safety certificates to LP-Gas truck operators who had



Safety Award

LP GAS

THE MODERN FUEL

L-P GAS
TRUCK OPERATOR

This is to Certify that

REPRESENTING

Has operated a Liquefied Petroleum Gas Truck on the highways of Kansas for ..... consecutive days without an accident of any kind. Because of the careful and safe discharge of his duties he has brought respect and honor to the Liquefied Petroleum Industry in Kansas. For this outstanding Record this certificate is issued.

The Kansas L-P Gas Association

Secretary

President

Kansas LP-Gas Assn. certificate of award for careful driving.

completed at least 365 days without an accident, 30 awards being made. A table model radio was awarded to John Foster, Prairie Gas & Equipment Co., Liberal, for his outstanding record of 3875 consecutive days without an accident.

The one day meeting was closed with a fellowship hour in the north ballroom of the Broadview hotel.

Kentucky

Committee chairmen will present their plans for the coming year at the board meeting of the Kentucky LP-Gas Assn. when it meets Dec. 10 at the Seelbach hotel in Louisville.

Committee chairmen appointed to date by President R. N. Short include: L. T. Dixon, legislative; Peter Wood, constitution and resolutions; Raymond Rains, public relations; Elmer Roll, S. R. Harvey, and George R. Postlewait, education; Frances L. Holliday, convention; Melvin E. Gayer, trade shows; Frank Truitt, membership; C. E. Nead, statistics.

New Jersey

Among the 150 guests at the general fall meeting of the New Jersey LP-Gas Assn. held Oct 23, were a number of local public officials whose presence emphasized the theme of the President's address. The association's leader, L. A. Katz, appealed for a better understanding between dealer, distributor, customer, and employer, the continuous effort on the part of those in the industry to conform to strict regulations in methods of installation, and stressed the benefits to be found in closer cooperation with local authorities.

Other speakers addressing the attendants at the Ritz Carlton meeting place in Atlantic City included R. H. Mahnke, who spoke on the LPGA's state integration program. A gas-vs.-electric cooking demonstration was presented by Sol Weill, of Geo. D. Roper Corp. R. W. Rassback, of Watts Regulator Co., presented a color film covering research and development of valves. In his talk he stressed the importance of pressure relief valves on water heaters.

Has Civil Defense Program

In a report on the activities of the association's directors, Murray Glass, vice president, reported on the group's state-wide LP-Gas civil defense program. The objective of this program is to use the individual and collective facilities of the industry in the state to supply propane and the portable equipment to use it in case of emergency. Widespread publicity has been received through newspaper stories. Efforts will be continued to

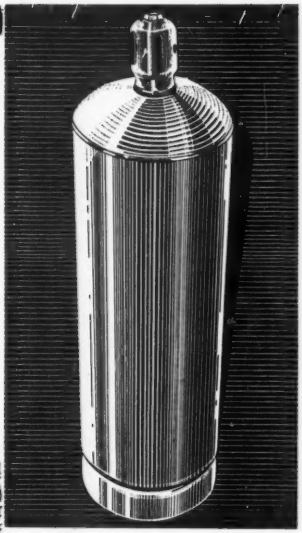
We've talked all year and had no fear
of any serious contradiction about

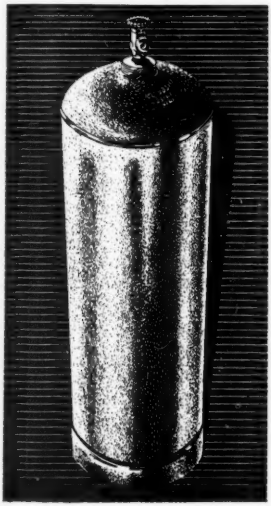
MAXIMUM SAFETY AND QUALITY
WITH MINIMUM PRACTICAL TARE WEIGHT

and

BUILT TO A STANDARD,
NOT TO A PRICE

and other things . . .





But now we're thinking of good cheer
and say to you with sincere conviction—

A VERY MERRY CHRISTMAS

AND MAY THE NEW YEAR BRING YOU

PEACE, PROSPERITY AND CONTENTMENT

HARRISBURG
STEEL CORPORATION
Harrisburg 4, Pennsylvania

Custom-Built Quality Products in Quantity
98 YEARS IN PENNSYLVANIA'S CAPITAL

MURRAY GLASS

S. W. WEILL

keep the public service program in motion.

In Mr. Weill's talk, he emphasized some interesting facts covering competitive selling angles of gas vs. electricity. Among these were the following:

In the Detroit area, the average cost of installing an electric range is $75. This is on top of an original purchase price of $369.

The electric industry claims these features as selling points: "Cool, clean, fast, simple, economical, modern, healthful, convenient, certain."

Electric ranges are equalling, or outselling, gas ranges at the present time.

In 1950 parts replacements in Detroit for electric ranges totaled 18,000 new switches, 73,000 surface units, 58,800 pilot lights and sockets, 9000 thermostats, and 5000 timers.

A survey made in Reading, Pa., on what owners of electric ranges wanted in the way of improvements brought out these critical comments:

1. Make easier to clean.
2. Make burners that cool off faster.
3. Improve wiring connections.
4. Make easier to operate.
5. Provide more ranges of heat.
6. Units should heat faster.
7. Place ovens at more convenient height.
8. Provide for emergency when power fails.
9. Place controls out of reach of children.
10. Provide way to clean without damaging coils.
11. More accurate setting of ovens needed.
12. They seem too expensive for what is in them.
13. Provide for quick, easy replacements of burned-out units.
14. Better service from electric companies.

In combatting the complaint that gas pilots are hot and should be replaced with electric, Mr. Weill said that gas pilots are not as hot as many other daily heat sources such as a 100-watt bulb which throws off 341 Btu per hour, or the human body which gives out 390 Btu per hour, while a gas pilot sends off only 200 Btu per hour.

M. Gale was chairman of the committee on arrangements of the one-day meeting. He was assisted by Mr. Katz, L. H. McGuire, Greg Asbee, Ed Keible, Murray Glass, and Al Milchanowski. The meeting closed with cocktails, dinner, and entertainment.

Nebraska

Warren Voss became president of the Assn. of Nebraska LP-Gas Dealers at the group's annual convention Oct. 1-3 in Omaha. He succeeded Carl A. Nelson, who has served as president for the past year.

Other new officers are R. L. Warren, 1st vice president; Perry Jarvis, 2nd vice president; and W. R. Hughes, secretary. Fremont Meyers is executive secretary.

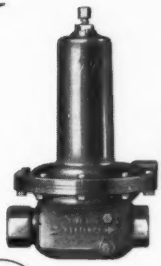
Speakers at the 3-day convention

Silent Masters

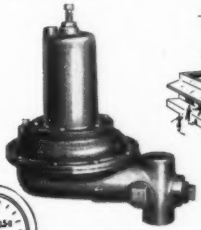
OF HIGH PRESSURE GAS

These High-Pressure Regulators are used by a large number of different industries. From the largest refinery to small industrial plants, they are always on the job, reducing high gas pressure to a low, steady flow of gas that can be utilized to the best advantage.

For complete specifications on High-Pressure Gas Regulators, request Bulletins 47A and 48A.



TYPE HPR is available in several models which allow inlet pressures up to 1000 lbs. (2000 lbs. in bronze) and reduces them to as low as 2½ psi. This wide pressure range, plus compact, rugged construction, makes this Regulator a natural for farm taps, general gasoline plant and refinery installations, and for controlling any high pressure gases.



TYPE HPH is recommended for smaller industrial plants where sensitive regulation and position lock-up are required. This Regulator may be used with inlet pressures up to 150 lbs. and the outlet pressures may be reduced to as low as ½ psi.

AMERICAN METERS

RELIANCE REGULATOR DIVISION

AMERICAN METER COMPANY
INCORPORATED

1000 MERIDIAN AVENUE, ALHAMBRA, CALIFORNIA

At speakers' table at meeting of Nebraska dealers (left to right): R. L. Warren, G. E. Switzer, Fremont Meyers, C. A. Nelson, Warren Voss, and Perry Jarvis.

included the following: Sam W. Reynolds, civil defense director; R. A. Cameron, chairman of the association's education committee, and Lowell Welsh and William Peterson, of the LP-Gas Service School section of the Nebraska State Trade School; A. T. Carrow, Cribben & Sexton Co.; M. E. Ennis, LPGA; and Robert Strawn, Jr., Gas Supply & Appliance Co.

Newly elected directors include R. L. Warren, Warren Voss, Perry Jarvis, H. R. Pearson, George C. Sheldon, W. R. Hughes, G. E. Switzer, Reuben Buchendall, and Victor E. Anderson.

Oklahoma

By CRAIG ESPY

W. J. Alexander, Black, Sivalls & Bryson, Inc., vice president of the Oklahoma LP-Gas Assn., presided over the one day meeting of the association, held in Oklahoma City Nov. 12. Attendance at the meeting was 85.

Forest Hall, Chambers Range Corp., luncheon speaker, told the group that they were spending too much time on office detail and not sufficient time in selling the superiority of LP-Gas as a cooking fuel. He quoted the Rural Electrification Administration to show that in the country it costs $4.90 per month to cook with an electric range as compared to slightly over 75 cents a month for gas.

Robert C. Bradley, Texas Natural Gasoline Corp., stated that adequate storage, either on the consumer's premises or elsewhere, is the greatest problem before the industry today. Talking on "How Underground Storage Prevents Gas Shortage," Mr. Bradley pointed out that LP-Gas can be stored underground for only 20% of the cost of storing it in steel containers. He said that storing the gas underground insured unlimited supply.

Wm. J. Marshall, fire marshal of Oklahoma, spoke on the duties of the fire marshal. Robert C. Tanner, District secretary of the LPGA Central office, reported on the growth of the Oklahoma association from 20 to over 60 members in the past year. He also


We wish you a Merry Christmas
and extend to you our best wishes
for a Happy and Prosperous New Year.
The Sprague Meter Company
BRIDGEPORT, CONNECTICUT
DAVENPORT, IOWA HOUSTON, TEXAS
LOS ANGELES, CAL SAN FRANCISCO, CAL.

Oklahoma association group (seated): Charles Monroe, Perry; H. E. Wilkins, Blackwell; Glenn Moore, Geary; Robert C. Tanner, district secretary. Standing: Glenn Springer, Enid; L. M. Mitchell, Clinton; V. C. Hurley, Minco; B. C. Truitt, Carnegie.

announced future plans for holding dealer management schools.

In behalf of the association, Mr. Tanner awarded 37 safe driving certificates to truck drivers of member companies. The key award, a radio, was given to A. L. Reherman, of the Borelli Hardware Co., Okarche, who had driven 2521 days without an accident.

The following directors were elected for two years: Francis Borelli, Okarche; Charles Monroe, Perry; R. E. Bolinger, Tulsa; Troy Stone, Durant; B. C. Truitt, Carnegie; Glenn Springer, Enid; Glenn Moore, Geary.

Directors elected for one year: Charles Corken, Oklahoma City; Herb Hone, Tulsa; D. R. Weston, Ada; Charles Hurley, Minco; Milton Frantz, Fairview; Clifford Hargrave, Telega.

The new board of directors will hold a call meeting soon to elect officers of the association.

Texas

Fifty working teams, composed of over 120 members of the Texas Butane Dealers Assn., put on a 3-day campaign in October to swell the membership ranks of the association. Believed to be the largest and most highly organized effort of the sort, the program was expected to bring in a large number of firms not affiliated with TBDA.

Preparation of prospective member lists and grouping them for action by the teams required several weeks' effort. The schedule was arranged so no team member would call on a competitor or have to travel any great distance.

The association is also getting under way with plans for its seventh annual convention and the second annual Southwestern Butane Exposition.

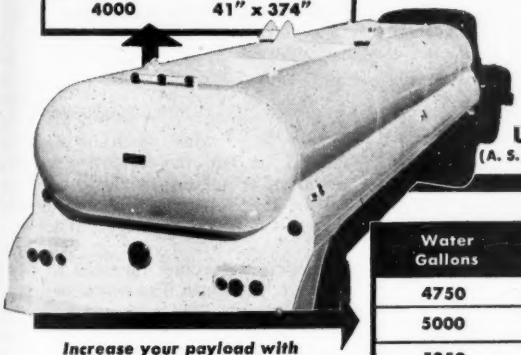
The event will be held June 18-20

EVEREADY TRANSPORTS

are built with EXTRA *know-how and care*

Water Gallons	Dimensions
3500	41" x 329"
3600	41" x 338"
3800	41" x 356"
4000	41" x 374"

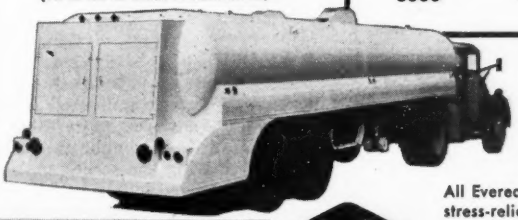
The knowledge and skill that go into the fabrication of every Transport leaving our factory are practically as old as the L P Gas Industry.



U69 TRANSPORT
(A. S. M. E. Code Construction)

Water Gallons	Dimensions
4750	46" x 353"
5000	46" x 371"
5250	46" x 389"
5500	46" x 408"

Increase your payload with
U68 TRANSPORT
(A. S. M. E. Code Construction)



U68 construction is the lightest weight transport made to meet requirements of all States. Made of lightweight high tensile steel, and X-rayed. All Eveready U68 Transports are stress-relieved in modern baking ovens.

WRITE, WIRE, OR PHONE US FOR FURTHER INFORMATION AND QUOTATIONS ON YOUR NEEDS.

TRINITY STEEL COMPANY INC.

EVEREADY

C. J. RENDER

3301 SOUTH LAMAR STREET TEL. HUnter 8321 DALLAS, TEXAS

at the Baker and Adolphus hotels in Dallas. The exposition will be held in the ballroom of the Adolphus and business sessions and the banquet will be held at the Baker.

Utah

A legislative-safety program is being developed by the legislative-safety committee of the Utah LP-Gas Assn. for presentation to association members at a forthcoming meeting.

Bob Lang is chairman of the committee with Orson Wright, Don Bolton, and President Marshall Haines assisting him.

CALENDAR

Dec. 6-7—LPGA Board of Directors. Sheraton Hotel, St. Louis, Mo.

Dec. 7-8—Wyoming LP-Gas Assn. Annual Meeting. Townsend Hotel. Casper.

1952

Jan. 7—National Butane-Propane Assn. Hotel Jefferson. St. Louis.

Feb. 25-26—Indiana LP-Gas Assn. Hotel Claypool. Indianapolis.

Feb. 25-26—LPGA Board of Directors. Del Prado Hotel. Mexico City, Mexico.

Mar. 24-26—LPGA Southeastern District Convention. George Washington Hotel. Jacksonville, Fla.

March 24-26—University of Minnesota LP-Gas Service School. St. Paul.

April 13-15—Mississippi LP-Gas Assn. Annual Convention. Edgewater Gulf Hotel. Edgewater Park.

April 30-May 2—Natural Gasoline Assn. of America. Rice Hotel. Houston, Texas.

May 12-14—LPGA Annual Convention & Trade Show. Palmer House. Chicago.

May 21-23—Gas Appliance Manufacturers Assn. Annual Meeting. The Broadmoor. Colorado Springs, Colo.

June 18-20—Texas Butane Dealers Assn. Baker & Adolphus Hotels. Dallas.

Social Security Coverage Extended to Self Employed

Beginning Jan. 1, 1951, approximately five million people who work for themselves came under the Federal Social Security law. This means that those members of the liquefied petroleum gas industry who are "self-employed" now have the same protection under social security as was previously afforded only to "employes."

The self-employed individual is in the position of both employer and employe. However, unlike the employe in a job covered by social security, he must report his own self-employment income on a yearly basis and not through regular pay roll deductions. This will be done when he files his federal income tax return for 1951 earnings. A section of the tax return will be used to report self-employment income for social security purposes.

A person whose net annual self-employment income amounts to $400, or more, is required to file a report of his earnings. This report is not optional. The social security contribution for self-employed people will be 2¼ % of the net earnings, up to the maximum of $3600 a year.

At the time of filing the 1951 income tax return, all of the self-employed will need a social security account number. A person should use the same account number all his life. If he has had an account card but lost or misplaced it, he should get a duplicate card bearing the same number. If he is now covered by the social security law but has never had an account card, he should apply for one before filing his return.

It is important for the person who works for himself to know fully what this new law means to him. Additional information about self-employment under the new law may be secured by visiting, telephoning or writing the nearest Social Security office.

Products...

Recessed Wall Heater

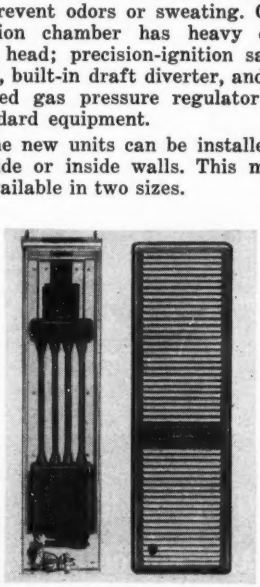
OHIO FOUNDRY & MANUFACTURING CO.
Steubenville, Ohio.

Model: Brilliant Fire.

Description: This line of AGA-approved, vented wall heaters features multi-duct construction of wall box, providing "free-air" insulation for safety. The "dimpled" pattern casing provides for the metal to touch wood studding only at staggered points. Variance in wall thickness is compensated for through a telescoping wall box permitting easy adjustment to fit any wall without need of extra parts and without use of special tools.

The radiator unit is 100% welded to prevent odors or sweating. Combustion chamber has heavy cast-iron head; precision-ignition safety pilot, built-in draft diverter, and approved gas pressure regulator are standard equipment.

The new units can be installed in outside or inside walls. This model is available in two sizes.



Portable Heater

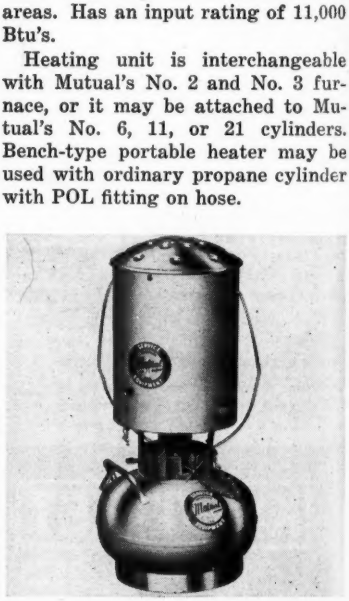
MUTUAL LIQUID GAS EQUIPMENT CO.
3600 W. Imperial Hwy., Inglewood, Calif.

Model: Portable Industrial Heater.

Application: For supplying warmth and heat to small areas, particularly telephone company aerial and ground tents, construction and field survey tents, brooders, milking sheds, etc., where heat is required during cold weather.

Description: No pumping or priming is required—just one valve to turn and light. The small, compact heater has a heavy, flat steel bottom, preventing tipping. It may be used efficiently in small confined areas. Has an input rating of 11,000 Btu's.

Heating unit is interchangeable with Mutual's No. 2 and No. 3 furnace, or it may be attached to Mutual's No. 6, 11, or 21 cylinders. Bench-type portable heater may be used with ordinary propane cylinder with POL fitting on hose.



Diaphragm Switch

GENERAL CONTROLS CO.
801 Allen Ave., Glendale, Calif.

Model: L-38.

Application: For heating plant installations where it is necessary to operate a switch by a variation in gas pressure.

Description: This low-pressure switch contains a normally open or normally closed switch actuated by gas pressure. Pressure applied against a spring-loaded diaphragm operates to tilt a mercury tube switch. The diaphragm material is impervious to LPG and the spring loading mechanism may be adjusted by a set screw located at the top cover plate.

The L-38 is suitable for air or gas applications only—at rated pressures. It can also be used as a device to turn on signal lights where gas or air pressure fails.

The operating point of the control is adjustable over a pressure range of 3 to 12 in. of water and operates from pressure differential of 2 to 4 in. of water.

Winter Air Conditioner

L. J. MUELLER FURNACE CO.
2005 W. Oklahoma Ave., Milwaukee.

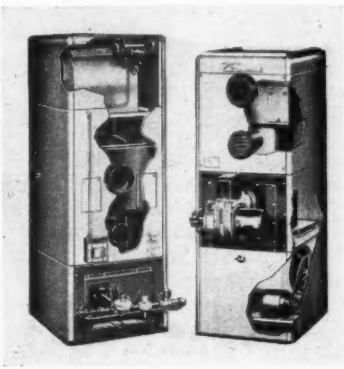
Model: Climatrol 114 & 115.

Application: Specially designed and priced for low-cost housing.

Description: Rated at 110,000 Btu input, these units are completely convertible from oil to gas or gas to oil with specially designed conversion burner packages. Type 114 has a conventional warm air outlet at the top. Type 115 features counterflow design.

A heavy gauge, welded steel heat exchanger with square, wrap-around radiator is built in. Each unit is equipped with a 13-in. blower, permitting slower blower speeds and quiet operation.

The compact units measure 24½ in. wide. The flue outlet is in front to minimize occupied floor space for closet or utility room installation. Burners on Type 114 and 115 are cast iron and include factory assembled manifold.



Gravity Furnace

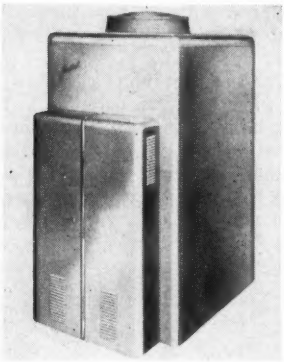
SURFACE COMBUSTION CORP.
Toledo 1, Ohio

Model: Janitrol GDS.

Description: This is a new addition to the Janitrol line of 75,000 and 100,000 Btu units. It has a Btu input rating of 125,000.

Emphasis has been placed on faster circulation and quieter operation. The new unit is assembled smoothly and easily.

Instantaneous heat delivery is assured by the latest in thermostatic



sensitivity, coupled with the fast response of the new Janitrol burner. Glass wool insulation in jacket saves heat and deadens sound.

The furnace is finished in blue, hammered enamel.

The use of round or rectangular duct work with an extended plenum saves valuable basement space.

Sealing Compound

CHICAGO GASKET CO.
1275 W. North St., Chicago

Model: Graycote.

Application: For sealing gaskets and threaded joints. Recommended for all gaseous fuels, oil, water, steam, and refrigerant applications.

Description: Composed of microfine metallic lead and a non-drying insoluble oil, this non-setting compound is said to never dry out or harden. It plates threads and other surfaces with a lubricating film which permits parts to be pulled up easily and yet prevents rust and corrosion. Elimination of extreme wrench torque, hammering, and cutting to break connections is claimed. Galling and seizing of all metals is eliminated.

In the gas industry, Graycote can be used for all threaded connections and flanges. It has been used on gas-burning equipment, heaters, meters, regulators, and manifolds.

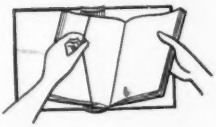
The seal can be used on oil line connections, drain plugs, transmissions, gear housings, and flanges.

Graycote handles pressures to 6000 psi; temperatures to 500°F.

Handy Binder

for BUTANE-PROPANE *News*

A beautiful DeLuxe Binder made especially for your favorite magazine. Holds 12 copies—one full year. Magazines can be inserted or taken out in a second's time, or bound permanently for future reference. Covered with long-lasting maroon Du Pont Fabrikoid with the name Butane-Propane News stamped in gold on cover and backbone. You'll be proud of these beautiful binders. $2.00 each, post paid. Get extra binders for past files. Send them to your friends as gifts.

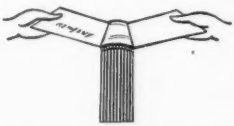


BOUND IN A FLASH

Slip open magazine under elastic band and it's bound firmly into place. Can be removed just as quickly.

OPENS FLAT

The curved backbone and patented binding system allow each magazine and page to open flat.



BINDS SECURELY

Patented Elasto Cord supports weight of each magazine separately, no mechanical devices to get out of order.

FOR PERMANENT BINDING

Plexon plastic covered wire and instructions supplied with each binder. Replaces elastic cord for permanent binding.

Send check for $2 for each binder or $2.50 from countries outside U.S.

Add 3% Sales Tax for California orders, and 3½% Sales Tax for Los Angeles City orders

BUTANE-PROPANE News • 198 S. Alvarado St., Los Angeles 4, Cal.

Commercial Range Top

DETROIT-MICHIGAN STOVE CO.
Detroit 31, Mich.

Model: Garland Spectro-Heat.

Application: Designed for all commercial ranges.

Description: This front-fired, all-hot top has 7 front-fired burners, each individually controlled, permitting 50% gas consumption without restriction of the cooking area. Heating with graduated intensities is made possible by the front-firing.

The top's 34-in. width has a capacity of four large size stock pots. It is also available in stainless steel ranges and for all gases.

Product Information

Production of a "gas to gas" "Hydrotherm" heating boiler has been announced by **Hook & Ackerman, Inc.**, of Pittsburgh and New York. The boiler automatically switches its source of heat from the city gas line to a stored "reserve" of LPG when temperature drops below a predetermined point. The operation is by means of an outside thermostat, installed in addition to the regular room thermostat.

The unit burns natural or LP-Gas at maximum efficiency; all controls are enclosed in the boiler jacket; the gas inlet for natural gas is at the rear of the boiler; the LPG inlet terminates inside the jacket and can be extended in the field with copper tubing to suit local conditions. The pilot burner is arranged to operate on natural gas only. It carries two thermocouples, one for natural gas circuit and one for the LP-Gas circuit.

•

The **Ingersoll Products Div.**, Borg-Warner Corp., Kalamazoo, Mich., has produced a new gas conversion burner, designated Series GCB, claimed to fit any size or shape forced air or gravity furnace and hot water or steam boiler. The manufacturer states that one burner meets all heating requirements for domestic installation, requiring no refractories or baffles.

The conversion burner is AGA-approved for all gases.

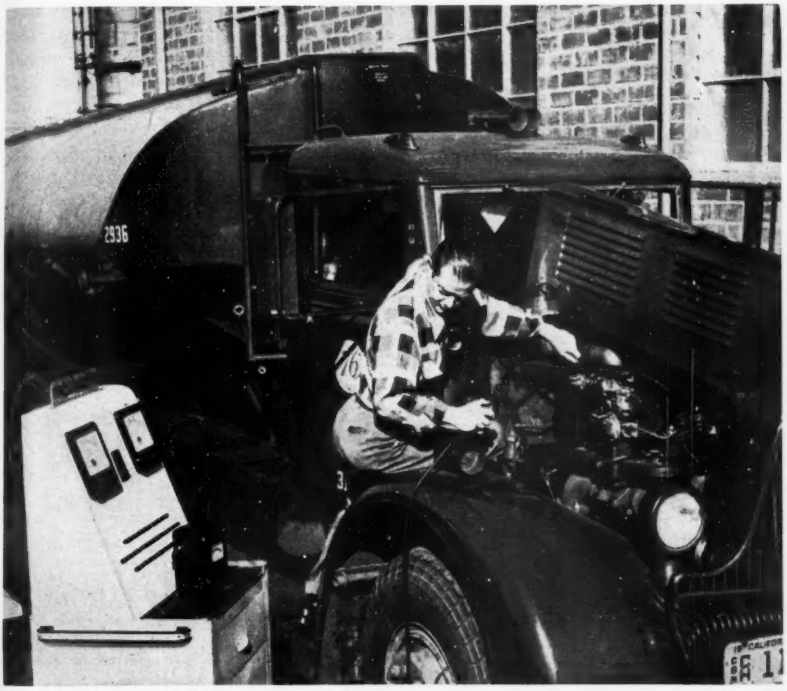
Tire Conservation Bulletin

An 8-page bulletin entitled "9 Ways to Get More Miles Out of Truck Tires" has been published by the B. F. Goodrich Co. The booklet is particularly interesting at this time of government restrictions and possible rubber shortages.

For copies of the bulletin, write the company at Akron, Ohio.

Butane-Propane POWER SECTION

Installations CARBURETION Conversions



Checking final adjustments on an engine conversion with a chassis dynamometer to ensure best economy and power.

Safety Pays

For 61 Trucks, Traveling 11,000 Miles Daily

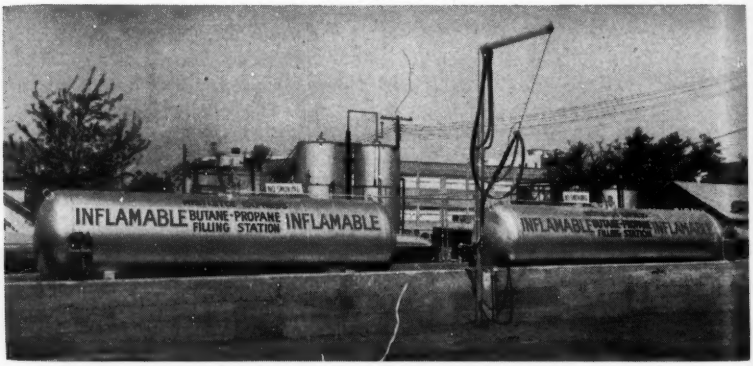
THE most severe tests of safety, economy, power and smooth running dependability under all road and weather conditions, are being met by LP-Gas in trucks of Mistletoe Express Service, Inc., of Oklahoma City, Okla., which operates an outstanding fleet of trucks.

On a roomy, well-paved site at the company garage, stands an attractive, modern, LP-Gas fuel dispensing plant, one of the first of its kind to be established in Oklahoma City.

From this location Mistletoe Express trucks and its other motor vehicles roll out daily to the four boundaries of Oklahoma to bind together more than 400 cities and towns in a fast and dependable delivery express service, which has attracted national attention.

Observing all the laws and regulations relating to safe motor vehicle operation, this company for the past five years has won the safety award of the American Trucking Assn. among fleets in the 3,000,000 to 5,000,000 miles class.

Frank Moore, safety director, and Fred Ward, superintendent of equipment, of Mistletoe, are enthusiastic over the performance of LP-Gas in their internal combustion engines. Mr. Ward first installed LP-Gas on an International L-185 truck with the regular low



Mistletoe trucks roll out from here daily after being filled with LP-Gas from two streamlined, 1000-gal. tanks connected to the dispensing unit shown in center foreground.

Filling the LP-Gas tanks on one of the trucks of Mistletoe Express Co., Oklahoma City. Left to right: Fred Ward, superintendent of equipment for Mistletoe; J. L. Grigsby, president, American Butane & Propane Gas Co., Oklahoma City; Ruhl Potts, chief fire inspector for Oklahoma City; and Joe Maione, in charge of parts for the express company. This truck carries two LPG tanks of 61-gal. capacity each.

compression head. He reported that this truck was driven 50,000 miles on a wear and maintenance check. This showed very substantial savings, Mr. Ward reported, and he added: "In addition to greater maintenance economy we saved 5 cents per gallon over the cost of other fuels. Up to this date we have operated this truck 131,000 miles without any mechanical failures or overhauls. I estimate that our trucks using LP-Gas fuel will run 200,000 miles without a major overhaul. This is double the mileage we have ever obtained on other fuel."

Another reason Mr. Ward gave for converting to LP-Gas was to reduce fuel pump trouble and save on oil. "At the present time," he continued, "we are running 10,000 miles on one filling of oil. On other fuel we changed oil each 2500 miles of operation and this oil came out in poorer condition than we are now experiencing with LP-Gas after 10,000 miles."

By O. D. HALL

In making the proper LP-Gas installations on its trucks the company was careful tc use the best equipment including all the safety devices, such as solenoid valves, excess flow valves and other UL-approved equipment. All trucks carry fire extinguishers installed by Bill Story, of the Fire Appliance and Supply Co., of Oklahoma City.

Frank Moore, safety director, Mistletoe Express Service.

Sent Driver to School

As another step toward maintaining its enviable record for safety and efficiency in operation, Mistletoe Express Service sent Leo Morton to school and trained him for this type of work. He took his examination for installation of LP-Gas equipment and secured his licenses. The company also makes all its drivers familiar with LP-Gas carburetion before turning the truck over to them.

The streamlined dispensing plant is creating much interest among fleet owners who visit the premises. It was installed last March by Bob Taylor, chief engineer for American Butane & Propane Gas Co. Ruhl Potts, chief fire inspector for Oklahoma City, who inspected the plant, stated that LP-Gas is as safe as any other motor fuel.

Mistletoe Express Service is a wholly-owned subsidiary of the Oklahoma Publishing Co., publisher of the "Daily Oklahoman," "The Oklahoma City Times" and the "Farmer Stockman." It started on a small scale to deliver its newspapers and, later, circulation deliveries for 30 other newspapers, all rivals of Oklahoma Publishing Co., periodicals. There soon arose from business firms and individuals who had witnessed the reliability of this service, a demand for certain special services.

Special Services to Many

The result was that the company now operates 61 motor vehicles traveling 11,000 miles per day. Cargoes include such commodities as oil well supplies and repair parts; oil samples being rushed for checking, seismograph charts, chicks from hatcheries, farm machinery repair parts, daily newspapers, milk from the state's mother's milk bank, emergency medical supplies, meats, flowers, motion picture film, air freight and hundreds of other articles which demand special service.

Mistletoe not only ties hundreds of Oklahoma towns together with its inter-city express delivery service but also operates local commercial delivery trucks in Oklahoma City, Tulsa, and in a number of smaller Oklahoma towns.

Dix Carburetion Given Underwriters' Approval

Dix Manufacturing Co., Los Angeles, has received notification that its entire line of carburetion products has been listed as approved by the Underwriters' Laboratories, Inc., Chicago.

This listing has been made following extensive tests covering all phases of operation of the equipment, under the re-examination policy of the UL. It covers use of the carburetion products on all types of internal combustion engines.

Case Series "D" Tractors Now Equipped for LP-Gas

The J. I. Case Co. is now delivering Series "D" tractors with optional equipment to operate on LP-Gas. Complete conversion kits for this engine are also available through the company's dealers, making it possible to change any previously built gasoline engine of this series to duplicate the standard factory propane engine.

This supplements the "LA" series tractors and "LAE" industrial power units for which similar conversions have been available for the past several months.

Ensign Carburetor Celebrates Fortieth Anniversary

From a small beginning in 1911 the Ensign Carburetor Co. expanded year after year until it now comprises an organization of several hundred employes with three factories and markets extending throughout the world. For a quarter of a century Ensign products have been used on practically all makes of leading makes of natural gas and butane-propane engines. These engines are used as

prime movers on equipment of all kinds, principally in the oil and transportation industries.

Orville H. Ensign, founder of the company, was an early pioneer in gasoline and heavy fuel carburetors for tractors, trucks, marine and stationary engines. Many improvements in modern internal combustion engine design are credited to him.

Perhaps no art is more difficult to explore and develop than is carburetion for multi-cylinder engines using LP-Gas as fuel. Usual practice common in the design of gasoline carburetors is meaningless in the light of LP-Gas carburetion requirements. For years Ensign has devoted its entire technical skill and financial resources to the perfection of LP-Gas carburetor equipment, including the carburetor, or mixer, and an LP-Gas vaporizer.

Adding to Ensign's line of equipment is the well-known "combination" carburetor for use with either wet or dry fuels. This makes possible the use of gasoline or butane-propane or natural gas—whichever fuel the operator has available.

In celebrating its fortieth anniversary, Ensign is particularly proud of its new Los Angeles assembly plant just occupied. With these new facilities in addition to the main factory in Huntington Park, Calif., and the plant in Chicago, the company is in a better position to meet increased demands for its products.

New Firm in Wisconsin Sells Gas and Appliances

Sterling C. McBrayer, Sr., and Vernon Schemburg, both of Hilbert, Wis., have formed tht Five Star Gas Co., Inc., in Denmark, Wis.

The firm will handle LPG and gas-burning appliances.

Changes Proposed in Taxation of LP-Gas Motor Fuel Use

FOR the past year and a half the state gasoline tax administrators have had under consideration a model law which would change the method of taxation of liquefied petroleum gas when used as a motor fuel. Until recently most states were not unduly concerned with this problem, although there existed on the statute books of many states a use fuel tax requiring the user to pay the tax. The publicity given to increased usage of LP-Gas in buses and trucks has caused tax administrators to re-examine their procedures on tax collection. As a result many tax administrators have a distorted picture of the extent of LP-Gas usage in motor vehicles and are considering steps to tighten up the machinery of tax collection.

(This is the opening paragraph of a bulletin recently released by Howard D. White, executive vice president of the LPGA. Because of its importance to the industry the entire report is published, the balance of which follows.)

With this in mind a committee of the North American Gasoline Tax Conference, a conference of tax officials, has prepared a model law covering a system of collection of taxes on spe-

cial motor fuels. At a meeting of the NAGTC, held in Columbus, Ohio, early in October, a draft of this model law was approved as an interim measure, pending further study by the committee and consideration of the experience that might be developed in those states that would adopt the model law.

This model law of the NAGTC requires a license of both the user, and the dealer who would sell LP-Gas as a motor fuel. By the language of the bill, the tax is an excise tax and arises upon the placing of LP-Gas into the motor supply tank of a motor vehicle used on the highways. This method of handling can raise a serious problem for the LP-Gas dealer who uses the cargo tank of his tank truck in supplying fuel to the truck's motor.

Could Apply to Cargo Tank

Under the language of this model law the cargo tank could be considered the motor fuel supply tank. Consequently, the tax would occur on all products placed in the cargo tanks. This result was pointed out to the NAGTC and objected to by LPGA. However, it is the apparent intent of some tax administrators to effectively prohibit a connection between the cargo tank and the carburetor, if not through specific language, through the practical effect of such a provision.

While the NAGTC model law was tentatively adopted in its existing form, the feeling of the tax administrators with regard to this problem was by no means unanimous. While some tax administrators were adamant in holding to this requirement other tax administrators felt that it was not necessary to impose such a restriction upon the industry. It is to be noted that the States of Oklahoma, Texas, and New Mexico at present specifically prohibit a connection between the cargo tank and the motor. There are other states that have already considered this problem and have per-

mitted such connection and provided for tax reporting, on the basis of a translation of mileage into gallonage. However, it is expected that this problem will become more acute with the present recognition given by the NAGTC.

This NAGTC model law also contains elaborate and burdensome record keeping and reporting requirements. Objections were expressed to these in view of the complex nature of the LP-Gas industry and the small proportion of product used for motor fuel. It is anticipated that these requirements will be modified on a local basis. The NAGTC committee will also continue its study on this aspect. The tentative model law is not perfect in other respects but the major objections of this industry were directed at the two aforementioned propositions.

The problem of the cargo tank connection to the motor will not be one of easy solution for many of the tax administrators will not accept a system of measurement through either a meter or on a mileage basis. In these states, if the NAGTC model law is enacted it may be necessary for the LP-Gas dealer to install a separate motor fuel supply tank. As of this time this problem is directly presented to LP-Gas operators in a few states that changed their special motor fuel use tax law in 1951. In a few other states the motor use tax law was changed to require a dealer's license. A brief summation of these changes follows:

FLORIDA: A substantial copy of the model NAGTC law was enacted. The law requires a license for both users of and dealers in LP-Gas for motor fuel use. The tax is imposed on placing the fuel into the motor fuel supply tank. However, the tax administrator has indicated that he will not require strict compliance with this provision on tank trucks and will ac-

cept payment of tax on a mileage basis. The LPGA is now developing a reasonable mileage figure to submit to the administrator. The law does not require the elaborate system of record-keeping contemplated by the NAGTC model law.

INDIANA: A substantial copy of the NAGTC model law was passed. A license is required of both users and dealers. The tax is imposed on the placing of the fuel into the motor vehicle supply tank. The tax administrator has indicated he will enforce this strictly, and that a separate fuel tank will be required to escape imposition of the tax on all fuel going into a cargo tank fueled vehicle. Failure to account for the fuel use tax can result in severe penalties. It is recommended that Indiana LP-Gas dealers operating LP-Gas fueled motor vehicles immediately check this law against their operations.

MAINE: The use fuel tax was modified to require a license of dealers but goes no further than this.

MINNESOTA: This State's use fuel tax was also modified to require a license of dealers and makes other changes including imposition of a tax on the placing of the motor fuel into the motor fuel supply tank. However, the language of the act omits specific coverage of an LP-Gas dealer using LP-Gas for the fueling of his own trucks only, and who does not sell LP-Gas for motor fuel. An interpretation may be required.

SOUTH DAKOTA: An amendment to the existing law extends the licensing to dealers but goes no further.

TEXAS: An elaborate revision of the existing law requires licensing of both users and dealers and adopts an elaborate record-keeping requirement. As above noted this state through prior enactment had prohibited a con-

nection between the cargo tank and the motor.

UTAH: An amendment to the existing law establishes licenses for both dealers and user. While not the exact language of the NAGTC model law and although not entirely clear as to intent, it could be construed to impose a tax on all LP-Gas going into the cargo tank of a cargo tank supplied motor vehicle. An interpretation may be required.

In view of these recent enactments, it is recommended that dealers in the States of Florida, Indiana, Minnesota and Utah review their operations to determine the application of these revised model fuel use tax laws to them. It is particularly urgent in the case of Indiana where the administrator has already firmly stated his position.

Federal Regulations Affect LP-Gas Industry

Federal regulations of concern to the LPG industry are covered in recent bulletins of the LPGA. Extracts from some of these appear below:

Inventory Controls Revised

NPA has issued a complete revision of its Regulation 1 covering inventory control. Items have been added to the table listing the materials subject to inventory limitations. Included in the new items listed are "gas cylinders." Under the provisions of the regulation no person may receive or accept delivery of this item if his inventory, by reason of such receipt will become more than a practicable minimum working inventory. A supplier is also prohibited from making deliveries if the acceptance by his customer would violate the order.

This revision also adds a list of materials subject to special inventory restrictions in other NPA regulations. Copper tubing in the distributor's inventory is subject to the limitations

of M-82 which restricts the inventory to the lesser' of (1) his average monthly inventory during the base period (1-1-47 to 1-1-50), or (2) a practicable minimum working inventory. Copper tubing in the dealer's inventory and other operating items for MRO, secured under Regulation M-46, are subjected to the inventory restrictions of M-46C. However, M-46C has not been issued to date.

Steel, copper and aluminum basic forms and shapes, including steel pipe, are subject to the inventory restrictions of CMP Regulation 2 which restricts inventory to the lesser of (1) that necessary to supply his services on the basis of his currently scheduled method and rate of operation during the succeeding 45 day period, or (2) a practicable minimum working inventory.

"Practicable minimum working inventory" means the smallest quantity of material from which a person can reasonably meet his deliveries or supply his services on the basis of his current rate of operation. In general, inventory controls apply only to controlled materials under CMP Regulation 2, scarce materials and items listed under NPA Regulation 1, and items for which priority assistance is available under the M orders.

Report of LP-Gas on Hand Nov. 1

The Revenue Act of 1951, which became effective Nov. 1, 1951, requires that LP-Gas wholesalers inventory and report their stock of LP-Gas on hand as of the opening of business on Nov. 1, 1951. Stock on hand includes both product in storage and in transit, if title had passed to the plant owner.

Coupled with the reporting is the requirement that a tax at the rate of ½c per gallon be paid on all such LP-Gas that is used for motor fuel use, or which remains in the hands of the plant owner on Dec. 31, 1951, the

deadline for the time of filing of this report.

This tax and reporting does not apply to LP-Gas held in retail stock at the place where intended to be sold at retail. It is considered not applicable to LP-Gas in cylinders at the establishment of a dealer but applies to all other storage. The tax is the "gasoline floor stock tax."

The tax of ½c per gallon is only paid on the product used for motor fuel. Consequently, in the report to be filed by Dec. 31, 1951, while the entire stock of product on hand Nov. 1, 1951, must be shown, a tax credit can be taken for that portion of the product that does not go into motor fuel usage. It would appear advisable to delay reporting until Dec. 31. If any product on hand Nov. 1, 1951 should remain in your tanks after Dec. 31, 1951, it will be necessary to pay the ½c tax on this and then apply for a refund.

The Internal Revenue Department has not as yet issued specific regulations covering this law or the procedure for establishing credits or refunds. When issued, we will advise our members. Treasury Department Form No. 887 is the proper form for reporting stocks on hand Nov. 1, 1951 and may be secured from the local Internal Revenue Office.

Under the present Treasury Regulations (Regulation 44), to support a claim for credit or refund for non-motor fuel use, the "ultimate vendor" must secure and have in his possession an exemption certificate from the consumer.

Adjustments In Ceiling Prices

CPR 67 covering retailers of tanks, where selling prices were customarily determined on basis of manufacturer's list price, you determine your present ceiling by applying the discount or percentage mark-up used during period April 1 through June 24, 1950,

to the present manufacturer's list price. Where selling prices were not so determined, you apply the percentage mark-up you last realized during the above period to the cost of the tank. In practice this procedure provides for automatic adjustment in retailer's ceiling prices based on cost to them. No report is required but records must be kept. If you cannot determine your ceiling price in this manner, application must be made to OPS.

Excise Tax Eliminated on Commercial And Industrial Appliances

The Revenue Act of 1951 eliminates the previous excise tax imposed on the manufacturer of commercial and industrial appliances.

Tank Manufacturers Section Organized in LPGA

At a meeting attended by more than 40 industry representatives in Tulsa, Okla., on Oct. 31, substantial progress was made on the activation of a new Tank Manufacturers Section within LPGA.

Following a review by Howard D. White, executive vice president, of the critical situation currently existing in Washington, D.C., in respect to the allocation of steel for tank production, Fred A. Henninger, chairman of the Equipment Section, recounted the actions taken by his group in this connection and expressed the conviction that greater unity of effort and more adequate financing were essential to obtain proper industry recognition and equitable treatment under the government's Controlled Materials Plan.

Following a general discussion, the group passed a motion providing for the establishment of a Tank Manufacturers Section and the appointment of a committee to supervise its

activities under LPGA administration. The following members were named to this committee: W. D. Buehler, Buehler Tank and Welding Works, Los Angeles, Calif.; A. W. Crowley, McNamar & Crowley, Salem, Ill.; Russell A. Gasal, Butler Manufacturing Co., Kansas City, Mo.; A. J. Hall, Burnham Corp., Irvington, N.Y.; Fred A. Henninger, Charlotte Tank Co., Charlotte, N. C.; H. E. Kirkpatrick, Delta Tank Manufacturing Co., Baton Rouge, La.; B. R. Sprayberry, Jr., Texas Boiler & Machinery Co., Dallas, Tex., and Howard D. White.

It was decided to establish a budget of $30,000 for the new section's first year of operation. Members in attendance at the meeting immediately pledged $20,950 for this purpose.

At the conclusion of the session, the newly appointed committee in charge met briefly and elected Mr. Henninger as chairman.

Texas Names Inspectors For Five Districts

Yancey Culp of Gainesville is the new Texas Railroad Commission inspector of butane and propane gas installations in the Dallas district.

Frank E. Harvick, director of the liquefied petroleum gas division of the Commission has announced five district inspectors

Claude Barham, Nacogdoches, will be in the San Antonio district; H. G. Briggs of Seymour, in the Houston district; John L. Wilson, of Wichita Falls, in the Lubbock district, and R. M. Pinkston, of Holland, in the San Angelo district.

The new inspectors' first assignment will be to see if LPG installations in schools and public buildings conform to safety standards. The LP-Gas division was created by the legislature this year.

The Trade

American Stove Co., St. Louis, Mo., has announced that it will, with the consent of its stockholders, change its corporate name to Magic Chef, Inc., effective Dec. 31.

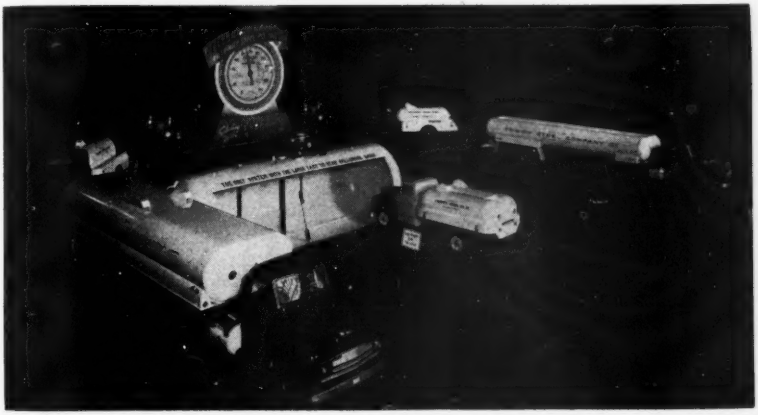
According to President Arthur Stockstrom, "this brand name (Magic Chef) dominates the half-century old name of the firm itself. Therefore, we are recommending . . . that our corporate title be changed . . ."

American Meter Co. has named Joseph L. Kiraly assistant to the vice president in charge of production. He was formerly associated with a management firm as an industrial engineer, assisting in surveying and installing modern managerial methods.

E. L. Korb has recently been named sales manager, wholesale marketing division of the **Pure Oil Co.** in Chicago, according to J. E. Nelson, manager of the company's Minneapolis wholesale office.

As a sales promotion feature, **Trinity Steel Co.**, Dallas, has built models of its line of storage tanks and transports for the LPG industry.

C. J. Bender, president of Trinity Steel, reports that the reaction to



Miniatures of Trinity Steel Co.'s line of LPG tank trucks and transports are used for publicity displays.

this promotion has been greater than expected. The display is used by the sales organization in the company's main office and utilized for industry meetings.

Rheem Manufacturing Co. has announced the appointment of William S. Rheem as manager of the South Gate, Calif., plant; Lloyd Simonson as manager of the Sparrows Point, Md., plant and Harry H. Filler as manager of the Bayonne and the new Linden, N. J., plants.

William S. Rheem, son of Richard S. Rheem, president and co-founder of the company, started his career at the Richmond, California, plant in 1938.

Lloyd Simonson has been manager of the South Gate plant since 1948, prior to which he managed the Bayonne plant. Harry H. Filler has had a key part in Rheem operations abroad.

Frank B. Persson has been appointed special representative for the Janitrol domestic-commercial space heating division, **Surface Combustion Corp.**, according to H. C. Gurney, sales manager of that division.

Mr. Persson will represent the firm in all types of government and military installation contacts on installations requiring space heating equipment with headquarters in Tulsa.

Ellsworth L. Mills, vice president of **The Bastian-Blessing Co.**, Chicago, recently announced the promotion of five members of the "Rego" sales staff to new assignments within the sales department.

Leroy "Red" Downing has been named sales engineer in eastern Kansas, western Missouri, northern Arkansas and western Tennessee. He will make his headquarters in Kansas City

and will work with the district sales manager, M. J. LaDue, Sr.

Jack Mengel, also of the Chicago sales department has been moved up to customers relations man.

Ray Murray has been promoted to the position of sales engineer covering the states of New Hampshire, Vermont, eastern Pennsylvania, western Maryland and most of the state of New York. Mr. Murray will work with District Sales Manager Adam Johnstone, whose headquarters are in New York City.

Don Sanders, also of the sales department, has been moved into the vacancy left by Mr. Murray.

James K. Calhoun has been appointed assistant sales manager in charge of all Rego customer relations in North and South Dakota, Minnesota, eastern Nebraska, northwestern Wisconsin and northern Michigan.

TOM HALEY

Tom Haley has been named sales manager at **Master Tank & Welding**, Dallas, according to Sam Weempe. Mr. Haley, identified with Master Tank since its beginning, was formerly sales manager of Master Petroleum Co.

C. A. McGee has been promoted to the position of office manager.

Again this year, the water heater division of the **A. O. Smith Corp.**, Kankakee, Ill., is sponsoring the traditional Christmas broadcast of Lionel Barrymore's performance of "A Christmas Carol," supported by an all-star cast.

A. O. Smith, manufacturer of

Permaglas automatic water heaters, is sponsoring the Charles Dickens' classic on behalf of its more than 10,000 dealers throughout the United States. The program will be carried from coast to coast as well as in Canada and the Hawaiian Islands on more than 500 stations of the Mutual Broadcasting System. It will be put on the air at 4 p.m. Eastern standard time, Sunday, Dec. 23, with a possibility of a delayed broadcast on Pacific Coast stations.

WM. B. COOPER

William B. Cooper has been appointed to the newly created position of sales manager of engineered products for **American Radiator & Standard Sanitary Corp.**, Pittsburgh, Pa.

Mr. Cooper will head a new department handling the sale of air conditioning, cooling and specialized heating equipment.

The engineered products department was created, according to D. D. Couch, vice president of sales, because of "the increasing volume of air conditioning sales and the number of new products that American-Standard is developing in this field."

As a result of the larger volume of products now being handled, **Warren Petroleum Corp.** has announced several personnel changes, according to H. E. Felt, vice president, and G. L. Brennan, general manager.

George W. Southworth has been named coordinator of supplies where he will supervise the exchange of products, maintain contacts with refinery and special products customers,

and maintain close contact with Warren suppliers.

J. T. Bradley, who has been manager of the Madison (Wis.) district sales office, has been transferred to the Tulsa office to become coordinator of sales and manager of the newly created customer service department.

J. W. Schriever, formerly manager of the Omaha (Neb.) office, succeeds Mr. Bradley at Madison.

J. D. CHARTON

The opening of a new **Weatherhead Co.** warehouse in Memphis, Tenn., has been announced by T. V. Scott, sales manager of the company's LP-Gas equipment division.

James D. Charton has been appointed district manager of the new warehouse which will facilitate delivery of Weatherhead equipment in Alabama, Arkansas, Kansas, Mississippi, Missouri, Nebraska, Tennessee, and part of Florida.

Dix Manufacturing Co., Los Angeles, has announced the appointment of Southwest Gas Equipment Co., Liberal, Kan., as national distributor of Dix carburetion equipment to the taxicab industry.

The latter firm is headed by Paul L. Maxwell, who has done outstanding work in pioneering the conversion of taxicab operations to propane.

New district manager of the New York office of **General Controls Co.** is Felix Wengerter, according to J. F. Ray, vice president in charge of sales. In his new position, he will be in complete charge of all New York and

Newark branch office territory activities.

The Glendale, Calif., firm has also named Robert L. Farmer factory sales engineer. He will concentrate on the aircraft field, where most of his work will deal with the company's "hi-g" line of electrically operated valves, pressure and temperature controls.

Following the rapid trend of farm tractors to LP-Gas, the **North Texas Tank Co.**, of Denton, Texas, has appointed the Tide LP-Gas Co., Inc., Edinburg, Texas, as the distributor of their "Nortex" custom-built tractor and motor fuel tanks for the Rio Grande Valley.

Hidalgo county in the Valley claims to have more tractors than any other county in the world.

Executive personnel of the Tide organization are Jackie Fields, president, and Donald Bentsen, vice president and secretary-treasurer.

The appointment of Leo McRoberts as account executive in its gas division is announced by **Minneapolis-Honeywell Regulator Co.**

Mr. McRoberts has been wholesale manager for the company in Dallas, Texas. He will make his new headquarters at the company's office in Minneapolis, and will specialize in sales of space heating equipment.

Day & Night Div. announced several sales appointments recently. They include: Frank Spratt, named southern California sales manager. He formerly represented the company in the Midwest.

Jim Buster has been named sales representative in the Midwest, headquartering in Tulsa.

John Lyons is now sales representative in the Pacific Northwest territory.

CLASSIFIED

Classified advertising is set in 6 point type, without border or display, at the rate of 15 cents per word per insertion, minimum charge per insertion $3. Box numbers for replies count as 5 words. Count as a word each one letter word and each group of figures. Classified advertising is only accepted when payment accompanies order. Copy and payment must reach publisher's office prior to 10th of month preceding publication.

HELP WANTED

SMALL BUT GROWING L.P. GAS COMpany near billion dollar government project wants young energetic partner as business manager. Must be capable of taking complete charge of business and handling all features of both tank and bottle business. Owner's health not good. Must be able to handle men and other details. Small investment to insure good faith required. Plenty of business. Box 510, BUTANE-PROPANE *News*, 198 So. Alvarado, Los Angeles, Calif.

L.P. GAS SALES ENGINEER—EASTERN producer desires L.P. gas sales engineer preferably experienced in sales to dealers, industrial plants, and utilities. Please state full particulars and experience in reply to L-59, P.O. Box 3495, Philadelphia 22, Pa.

SITUATIONS WANTED

MAN—16 YEARS EXPERIENCE. CAN handle men and bulk plant, installation and service. Can meet public and sell. Willing to work hard for future. Box 515, BUTANE-PROPANE *News*, 198 So. Alvarado, Los Angeles, Calif.

BUSINESS OPPORTUNITIES OFFERED

ONE OF THE CLEANEST LITTLE bulk plants in California. New modern equipment, storage all new 250# propane tanks, two late model delivery trucks, two pickups. New modern office and showroom, located forty-five minutes from large refineries. Must be sold for partnership dissolution. Inquire Box 495, BUTANE-PROPANE *News*, 198 So. Alvarado, Los Angeles, Calif.

ARE YOU INTERESTED IN REFILLING 20's, 60's and 100's in large quantities on a franchise basis. Please tell us what territories you can service and also can you furnish us truckload lots. Address: Portable Heater Co., Painesville, Ohio.

BUSINESS OPPORTUNITIES OFFERED—Cont.

PROSPEROUS PROPANE BUSINESS located in middle-west. 2000 customers, over 1,000,000 gallons yearly. New building, three new bulk trucks, plus miscellaneous equipment. Over $500,000 sales annually. No blue sky. Statement from banker showing ability to pay $100,000 necessary before any inquiries will be answered. Box 520, BUTANE-PROPANE *News*, 198 So. Alvarado, Los Angeles, Calif.

THRIVING BOTTLE AND BULK PROpane gas business located in midwest industrial center, have franchise with major company for gas and appliances, over 425 bottle customers and 150 industrial and domestic bulk customers. Two bulk trucks, one pickup bottle truck all new. Equipment and merchandise will inventory at approx. $18,000. Priced at $5000 plus inventory. Box 530, BUTANE-PROPANE *News*, 198 So. Alvarado, Los Angeles, Calif.

WELL ESTABLISHED L.P. GAS BUSIness located in central Pennsylvania. Approximately 500 customers using meter plan. Excellent source of supply close. Owner has other business interests. Box 525, BUTANE-PROPANE *News*, 198 So. Alvarado, Los Angeles, Calif.

FOR SALE—L.P. GAS AND APPLIANCE business located in Southern Calif. Approximately 400 good customers, of which 250 are tank leases, consisting mostly of 75, 150 and 500 gallon propane tanks. Will sell leases, 2 trucks, 10,000 gal. propane storage, also store completely stocked with nationally known merchandise. Will sell with or without property. Statement from banker showing capability of handling transaction necessary before any inquiries will be answered. Write Box 490, BUTANE-PROPANE *News*, 198 So. Alvarado, Los Angeles, Calif.

BUTANE-PROPANE News

Index to Volume XIII

January Through December, 1951

Jenkins Publications, Inc., Publisher
198 South Alvarado St., Los Angeles 4, Calif.

Page

38
46
142
74

149

85

153

168

45

55

156

36
68

53

49

ws